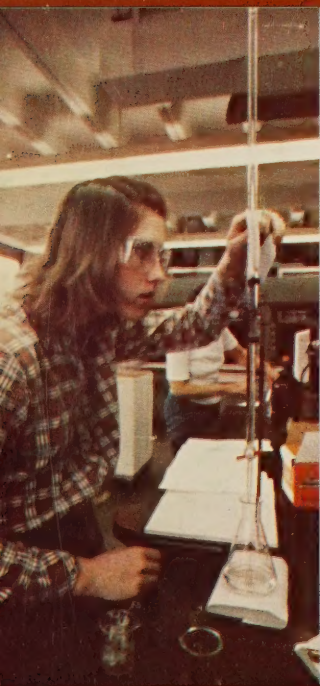




Bröome Community College

Catalog 1980-1981



ACCREDITATION

Broome Community College is a member of the Middle States Association of Colleges and Secondary Schools.

The College is supervised by the State University of New York, and its curriculums are registered by the State Education Department.

The Civil, Chemical, Electrical and Mechanical Engineering Technology programs are ABET-accredited engineering technology curriculums. ABET is the Accreditation Board for Engineering and Technology, Inc., formerly the Engineers Council for Professional Development (ECPD).

The Dental Hygiene program is accredited by the Council on Dental Education of the American Dental Association, and the Nursing curriculum is accredited by the National League for Nursing.

The Council on Medical Education of the American Medical Association (AMA) has accredited three other curriculums—Radiologic Technology, Medical Record Technology and Medical Office Assistant, which is also accredited by the American Association of Medical Assistants. The Medical Record Technology program has double accreditation, too, having been approved by the American Medical Record Association as well as by the AMA.

NON-DISCRIMINATION COMMITMENT

Broome Community College, in compliance with Title VI of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, does not discriminate on the basis of race, sex, religion, national origin, age, handicap, color, or marital status in admissions, employment and treatment of students and employees.

It is the policy and intent of the College, moreover, to comply with Section 504 of the Rehabilitation Act of 1973 as amended, which states:

"No otherwise qualified handicapped individual in the United States, as defined in section 7 (6), shall, solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

The College reserves the right at any time to make changes deemed advisable or necessary.

For information about the college, its programs, and its admissions procedure contact

Office of Admissions
Broome Community College
P.O. Box 1017
Binghamton, New York 13902

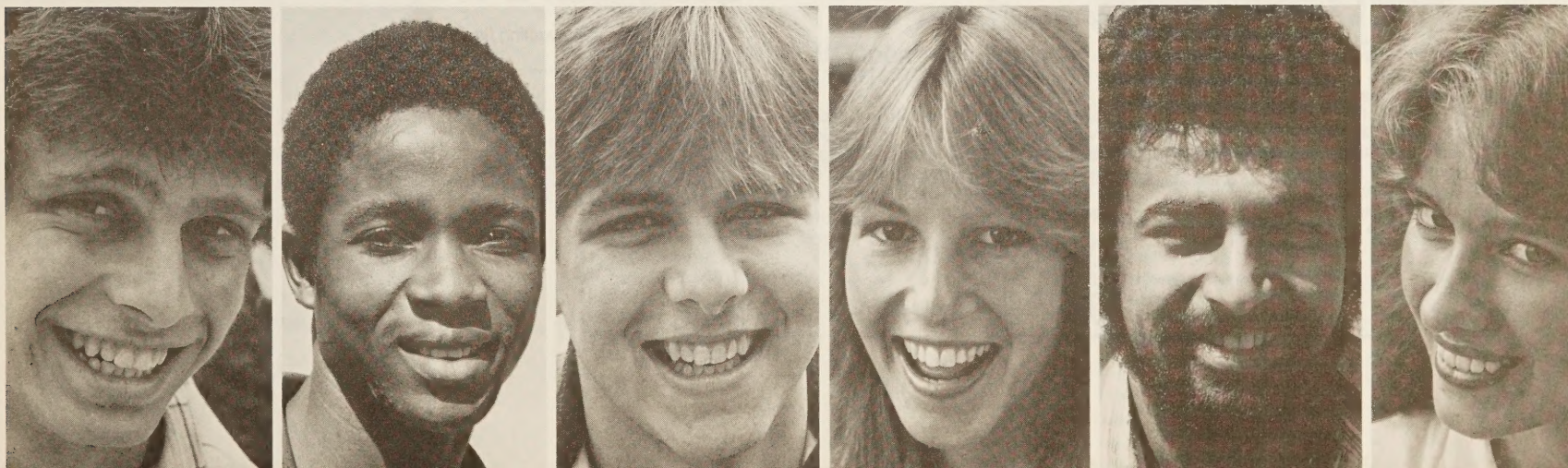


1980-81 Catalog

Broome Community College

Binghamton, N.Y. 13902

A Comprehensive Community College
Supervised by the State University of New York
and
Sponsored by the County of Broome



52 COLLEGE PROGRAMS OF STUDY

DEGREE-GRANTING CURRICULUMS IN 30 FIELDS OF STUDY

Business

- 1-Accounting
- *2-Business Administration
- 3-Marketing Management and Sales Secretarial
- 4-Executive
- 5-Engineering (Industrial)
- 6-Office Services Assistant

Computer Studies

- 7-Computer Science
- 8-Data Processing-Business
- 9-Data Processing-Technical

Engineering and Engineering Technology

- 10-Chemical Engineering Technology
- 11-Civil Engineering Technology
- 12-Electrical Engineering Technology
- *13-Engineering Science
- 14-Industrial Technology
- 15-Mechanical Engineering Technology

Health Sciences

- 16-Dental Hygiene
- 17-Medical Laboratory Technology
- 18-Medical Office Assistant
- 19-Medical Record Technology
- 20-Nursing
- 21-Radiologic Technology

- *22-Liberal Arts and Sciences
- Associate in Arts Degree
- Associate in Science Degree

Special Programs

- 23-Child Care
- 24-Criminal Justice—Police
- 25-Fire Protection Technology
- 26-Individual Studies
- 27-Industrial Safety and Occupational Hygiene
- 28-Paralegal Assistant
- †29-Tool and Die Making
- †30-Automotive Service Specialist

DIPLOMA PROGRAMS IN 18 FIELDS OF STUDY

These programs generally consist of half the number of credits in an associate degree curriculum and are, therefore, the equivalent of one year of college study. Most are given in the evening.

Business with emphasis in:

- 1-Accounting
- 2-Computer Studies
- 3-Management
- 4-Marketing—Sales—Retailing

5-Child Care

6-Criminal Justice

7-Fire Protection Technology

Industrial Technology

- 8-Applied Mathematics
- 9-Chemical
- 10-Civil
- 11-Computer Studies
- 12-Electrical
- 13-General Technical Studies
- 14-Industrial Safety and Occupational Hygiene
- 15-Mechanical
- 16-Production Management

17-Liberal Arts

18-Paralegal Assistant

CERTIFICATE PROGRAMS IN 4 FIELDS OF STUDY

These programs lead to certificates in areas for which entry-level employment does not require an associate degree, or they consist of a concentration of studies in a particular area which may be up to a year of college work:

- 1-Dietetic Assistant
- 2-General Office
- 3-Interior Design
- †4-Machinist Related Instruction

Unless otherwise indicated, degree programs are occupational in nature and designed to prepare graduates for immediate employment.

*These programs are designed to prepare graduates for transfer to four-year colleges and universities in the third, or junior, year.

†These programs are awaiting final state approval, which is expected before the start of the academic year.

HOW TO USE THIS CATALOG

To help readers find their way through the pages of this catalog, a few words of explanation may be helpful. The catalog is assembled in essentially five parts, as follows:

PART 1, which consists of pages 1 to 28, contains the policies, procedures and regulations of the College. And as the accompanying table of contents shows, these are divided into such areas as admissions, financial aid, expenses, academic affairs and student affairs.

PART 2, which runs from pages 29 to 55, is a rundown of the College's programs and curriculums, arranged in alphabetical order. It shows the courses taken by students in each semester, along with the number of class hours, laboratory hours and credits for each. A summary of the field for which each curriculum prepares its graduates is also included.

PART 3, from pages 56 to 67, is directed to part-time students. It has

important academic information for them including a presentation of the programs of study for them for degrees, certificates and diplomas, as well as mini courses.

PART 4, covering pages 68 to 113, is a listing of the descriptions of the college's courses. These are arranged in alphabetical order, according to subject matter, starting with the Accounting and other business courses.

PART 5, which appears on pages 114 to 122, is essentially the listing of the administration and faculty of the college. There is also some information about the State University of New York, of which the College is a part, and the College Calendar.

Attention is also directed to the **INDEX** on pages 123 and 124. This is an alphabetical listing of the topics covered in the catalog together with the page numbers where one can find them.

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LONG RANGE GOALS

Broome Community College is committed to a broad view of education defined simply as the preparation of people to live in today's complex world.

It is an accepted fact that benefits from our College programs flow to many persons, directly and indirectly. Benefits take many forms. Some are individual and accrue to the direct recipients of community college education. Among the advantages are a higher income, a more satisfying job, greater effectiveness as a consumer, greater ability in allocating time as well as money, direct enjoyment of the educational process and its related activities, and lifetime enhancement of cultural and other experiences.

Some benefits are social and accrue to non-recipients as well as direct recipients of community college programs. Among the gains are greater economic growth based on the general advancement of knowledge and elevation of skills and on the higher proportion of the population in the labor force and the enhanced mobility of members of the labor force.

Other gains include greater political effectiveness of a

democratic society based on the more adequate knowledge and more active participation of citizens; greater social effectiveness of society through the resultant better understanding and mutual tolerance among individuals and groups; the more effective preservation and extension of our cultural heritage; the greater ability of individuals and groups to accept and adjust to rapid change; and the greater potential contribution of educated parents to the welfare of their children.

Broome Community College strives to create a stimulating environment and to shape the College to meet the needs of those it serves. Our College in a democratic way will assist in promoting educational experiences for the students that will lead to the fulfillment of their personal goals; developing within the students a sense of responsibility to themselves and to others; and serving the community by offering flexible curriculums and a variety of resources and activities to meet its needs.

OBJECTIVES

1. In providing equal opportunities in response to community needs and interests:
 - a. Students will identify their academic and vocational strengths and/or interests.
 - b. Students enrolled in career-oriented curriculums will demonstrate competencies required for para-professional, vocational or technical employment.
 - c. Students enrolled in transfer curriculums will plan and execute their programs in order to achieve acceptance and success at a baccalaureate degree-granting institution.
 - d. Students who are disadvantaged in the areas of reading, writing, mathematics and/or study skills may take developmental courses.
 - e. Students interested in continuing education will avail themselves of courses for self-improvement, leisure enrichments and lifelong use.
 2. The students will participate in a democratic society by supplementing their basic academic commitments and testing their ideas and ideals through active involvement in curricular, extracurricular and community affairs.
 3. The community will utilize the College as a cultural, social and educational resource.
 4. Members of the faculty and professional staff will assist students in pursuing academic, vocational and personal goals.
- These objectives will be achieved through a regular schedule of day and evening classes, a counseling program and other College resources. Students and faculty will engage in a continuous evaluation of students' abilities, accomplishments and interests.

The Admissions Office selects students as they apply, complete the admissions process, and are found suitably qualified for a particular program.

Application forms may be obtained from the Broome Community College Admissions Office or from most high school guidance offices. Completing the application and forwarding the necessary information to the College is the applicant's responsibility, not the College's or the high school guidance counselor's.

Applicants are advised to look this catalog over carefully to become familiar with the program they choose to enroll in. The chart on page 6 is especially helpful, as it shows the high school subjects required and recommended as preparation for the College's degree offerings.

Acceptance by the BCC Admissions Office applies only for the particular semester designated. If an applicant decides to postpone enrollment to any future semester, he/she must re-apply. To simplify the re-application process, the Admissions Office keeps applicants' records on file for two years.

Here are a few items to note concerning the application process and requirements:

1. BCC does not require the American College Testing

(ACT) or Scholastic Aptitude Test (SAT) score reports. If either or both are available, however, they should be forwarded to the Admissions Office.

2. The application form and instructions have been made as short and concise as possible. This is one of the reasons the State University of New York Application and Guidebook is not used.
3. The application must be accompanied by a \$10 non-refundable fee when it is sent to the Admissions Office, unless the applicant is re-applying or seeking admittance into the Early Admissions program, which is described in the next column.

Tuition Deposit Policy

Students admitted to the College prior to August 1 will be billed for a \$50 tuition deposit. This payment will be applied toward the Fall Semester tuition bill for those students who register. Students who do not register for the Fall Semester can obtain a refund of the tuition deposit, through the end of the first week of classes, by submitting a request in writing to the College Controller. At the end of the first week of classes, the tuition deposit is non-refundable.

FULL OPPORTUNITY PROGRAM

By law, BCC is required to admit to some full-time program every applicant who is (a) a resident of Broome County, (b) will be graduated from high school the preceding June or (c) is a veteran of the armed forces with a high school diploma. This requirement does not necessarily mean that acceptance will be to the curriculum of the applicant's choice, nor that in all cases a diploma is required.

To qualify for this guarantee, Broome County residents must complete and submit all their application information no later than March 1. After that date, applicants will be considered regardless of their place of residence, high school graduation date or veterans status.

SPECIAL ADMISSIONS PROGRAMS

Early Admissions is a program for high achieving students who are in high school and can benefit from taking college-level courses, full or part-time, *before* graduating from high school. While high school seniors are usually enrolled in this program, qualified juniors and sophomores may also be eligible.

Anyone interested in part-time Early Admissions should contact the Admissions Office or his/her high school counselor for the special application form; full-time applicants should use the regular new student application.

The **Educational Opportunity Program (EOP)** is designed for students who are educationally and economically disadvantaged and can meet the established criteria for assistance. For more details, see page 25.

Non-High School Diploma applicants may qualify for a high school diploma by successfully completing 24 credit hours of course work at BCC or any college in a degree, diploma or certificate program. Students currently in high school or those having been out of high school less than one year typically **cannot** qualify for this program.

Transfer credit for students who have taken or are taking college level course work is subject to the approval of the chairperson of the student's academic department. Grades earned will not be entered into the cumulative grade-point average at Broome Community College. Students must in all cases submit to the College Admissions Office official transcripts of all college level work taken and/or being taken before formal acceptance will be granted.

Students transferring courses to BCC will be required to complete in credit hours the equivalent of a semester's course of study at BCC for graduation. The determination of this minimum will be the responsibility of the department faculty sponsoring the curriculum, but in no case will the requirement be less than 12 semester credits.



ACADEMIC PREPARATION FOR ADMISSIONS

Curriculum	REQUIRED High School subjects	RECOMMENDED High School subjects
Business Accounting Marketing Bus. Admin. Secretarial		2 units Mathematics incl. Intermediate Algebra 2 units Science College preparatory courses, Typewriting
*Chemical Engineering Technology	Chemistry 3 units Mathematics incl. Trigonometry	Additional Mathematics and Science courses Physics, Chemistry
*Civil Engineering Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
*Computer Science	3½ units Mathematics incl. Advanced Algebra or Precalculus Math	Additional Mathematics, Science and Technical courses, Computer Programming
*Data Processing	2 units Mathematics Elementary Algebra and Geometry or Elementary and Intermediate Algebra or Integrated Math Sequence I and II	Additional Mathematics (Intermediate Algebra urged) Computer Programming Typewriting
*Data Processing— Technical	2½ units Mathematics Elem. Algebra, Geometry and Intermed. Algebra or Elem. Algebra, Geometry and Math 11 or Integrated Math Sequence I, II, III	Additional Mathematics (Intermed. Algebra urged) Computer Programming Typewriting
†Dental Hygiene	†1 unit Mathematics Biology, Chemistry	Geometry Social Studies Typewriting

Curriculum	REQUIRED High School subjects	RECOMMENDED High School subjects
*Electrical Engineering Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses Physics
*Engineering Science	Chemistry, Physics 3½ units Mathematics incl. Advanced Algebra or Pre-calculus Math	Additional Mathematics Science and Technical courses, Computer Programming
Liberal Arts and Sciences		2 units Mathematics 4 units in any combination of science, language or additional mathematics College preparatory courses
*Mechanical Engineering Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
†Medical Laboratory Technology	2 units Mathematics Biology, Chemistry	Additional Mathematics Science courses
†Medical Office Assistant	1 unit Mathematics Biology, Chemistry	Additional Mathematics Science courses Typewriting
†Medical Record Technology	1 unit Mathematics Biology	Additional Mathematics Science courses, Chemistry, Typewriting
†Nursing	Algebra Biology, Chemistry	College preparatory courses
†Radiologic Technology	2 units Mathematics 1 unit Biology	Additional Mathematics Science courses, Typewriting 1 unit Physics

*Academic units of Mathematics are Regents courses, such as Elementary Algebra, Geometry, 11th year Math or Trigonometry. (For Engineering Science Students, 12th year Math).

*BCC has a developmental program that enables students lacking the proper academic preparation for this curriculum to take courses that will qualify them. They can take these courses at BCC or elsewhere during the summer preceding their enrollment or during the fall and spring semesters, in which case they would need three years to complete the curriculum.

†Academic units of Mathematics are Regents courses such as Elementary Algebra, Intermediate Algebra or Geometry.

†In these programs, Broome Community College gives priority for admissions to Broome County residents who will graduate from high school this academic year or are service veterans.

†Students interested in a degree in a health science curriculum who enter the College in another program are cautioned that there is no guarantee that a petition to transfer will be approved. They should discuss the possibilities with the appropriate department chairperson.

†Students without geometry must complete a short geometry module in the summer before they enter BCC or during the first semester of their freshman year.

NOTE: The REQUIRED SUBJECTS listed in chart must be Regents subjects, except for Chemistry in Engineering Science and the science courses in the Health Sciences programs and physics in the Engineering Technologies. Regents or general level subjects are appropriate in those instances.

Grades of C (74) or above are necessary in all the preparatory required high school (college) subjects for Dental Hygiene and Nursing applicants and in the biology requirement for Radiologic (X-ray) Technology. A grade of at least 80 is needed in Physics and Mathematics for Engineering Science applicants. A grade of at least C (74) is needed in Mathematics for Computer Science applicants. All other preparatory required high school (college) subjects must be completed with grades of D (65) or better.

Considerable financial aid is available to students of Broome Community College, and the College maintains a Student Financial Aid office to help students. Information and applications for financial aid are sent to students who are seeking full-time enrollment when they apply for admission. Any part-time student planning to take 6 credit hours or more may qualify for financial aid by formally applying and being accepted into a degree, diploma or certificate program. Part-time students may receive information/applications by contacting the Student Financial Aid Office.

Financial aid at BCC falls into three broad categories—grants that do not have to be repaid, loans on which interest rates are usually low and that have to be repaid after graduation or leaving the College, and part-time employment called Work-Study. Assistance usually comes from a combination of these resources commonly referred to as a "financial aid package."

STUDENT AND FAMILY RESOURCES

A student's financial need is a term used to describe the funds required by a student to pay for his/her college education in excess of the amount that he/she and parents can afford to pay. Financial need is determined by using a standardized formula, which defines the "initial" or "demonstrated" need. The formula:

Take the "total educational costs" and subtract the "parental contribution and student's summer earnings." This amount is the initial or demonstrated need.

The Financial Aid Office at the Broome Community College operates on the premise that all parents and students have a responsibility to contribute as much as they can toward the cost of the student's education. This contribution plays the primary role in determining the actual initial need.

To qualify for financial aid, a student must be enrolled in a degree program of the College and be taking 6 credit hours or more, in addition to having an initial or demonstrated need. This need can be met in a number of different ways—a combination of grants, loans and work-study funds in varying amounts of each. This combination is put together by the financial aid administrator and is called a "financial aid package."

ESTIMATING EXPENSES

Listed below are charts showing the estimated average costs for the 1980-81 college year for student expenses, depending on whether the student lives at home or not and is dependent on his/her parents or not. These cover a 9-month period which is the length of the college year—September to May.

Expense Charts

FOR DEPENDENT STUDENTS

	Single Commuter (living home)	Resident (living near campus)
Tuition	\$ 730	\$ 730
Fees	66	66
Books	180	180
Transportation	357	437
Home Maintenance	900	
Personal Expenses	400	400
Lunch at School	300	
Room		1,350
Board		1,100
Total	\$2,933	\$4,283
Non-NY State Resident: (Additional tuition)	730	730
Total	\$3,663	\$5,013

NOTE—A commuter is a student who lives with his/her parents and commutes to school; a resident is an out-of-town student residing locally.

FOR INDEPENDENT STUDENTS

	Single, Divorced, Widowed Separated (no children)	Married Head of Household one working or school (no children)	Married Two working or school (no children)
Tuition	\$ 730	\$ 730	\$ 730
Fees	66	66	66
Books	180	180	180
Rent	1,600	1,854	1,854
Food	1,100	1,436	1,650
Clothing	260	441	492
Transportation	541	541	661
Recreation & Personal	450	500	500
Total	\$4,927	\$5,748	\$6,133
Non-NY State Resident: (Additional tuition)	730	730	730
Total	\$5,657	\$6,478	\$6,863

- NOTES**—1) Medical, child care, debt repayment, and miscellaneous expenses may be allowed if the student is able to document the cost.
- 2) Child care allowance—up to \$900 for each dependent child.
- 3) Transportation line includes insurance, license plates, maintenance. An additional allowance may be allowed depending on distance traveled from home to the College.

—ALL COSTS ARE SUBJECT TO CHANGE—

HOW TO APPLY FOR FINANCIAL AID

All students must apply for financial aid each academic year.

Federal and State Grants

All financial aid applicants will be expected to apply for two major sources of financial aid—the Federal government's Basic Educational Opportunity Grant (BEOG) and the State's Tuition Assistance Program Award (TAP). Although the College provides information, applications and assistance, these funds are not generated by the College and must be applied for directly by the student to the agency. Further information regarding these and other problems is available at the Financial Aid Office (Wales Building, Room 101).

College Administered Financial Aid

To be considered for financial aid administered by the College, parents of dependent students and self-supporting students must submit the Financial Aid Form (FAF) to the College Scholarship Service and the College Application for Financial Aid to the Financial Aid office. By filing the forms outlined above, students will be considered for these financial aids, about which further information is available at the Financial Aid Office (Wales Building, Room 101).

Federal

National Direct Student Loan
College Work Study
Supplemental Educational Opportunity Grant
National Nursing Loan
National Nursing Scholarship

Institutional

BCC Foundation Grant

The college administers a number of programs which have been established by private individuals, companies, and organizations. These scholarship and grant

programs have varying eligibility requirements. Students who wish to apply for these special scholarships may request an application from the Financial Aid Office.

Priority Funding Dates

Fall Semester April 15
Spring Semester December 1

Incoming students should apply for financial aid when they apply for admissions. Because all college-based funds are limited, students are strongly encouraged to submit the appropriate forms far in advance of the above priority dates.

Completed applications received prior to April 15 will be given first priority. Applications received after this date will be considered as long as funds are available.

FAF should be mailed to College Scholarship Service before March 1 to be received at the College by April 15.

Notification of Decisions

Students are generally notified of the action taken on their application shortly after April 15. Students who apply late will be notified as folders are completed. A brochure explaining students' rights and responsibilities is sent to all financial aid recipients at the time the award is made. Interested students may receive a copy of this brochure before an award is made by contacting the Financial Aid Office.

If a student's request for aid is denied, the reasons for the decision are explained. Students may request an appeal on financial aid decisions by writing a letter to the Vice-president for Student Affairs.

ADDITIONAL FINANCIAL AID INFORMATION IS AVAILABLE IN THE COLLEGE FINANCIAL AID OFFICE (Wales Building, Room 101), such as brochures from the Office of Vocational Rehabilitation (OVR) and Social Security.

PACKAGING POLICY

At Broome Community College the self-help concept of financial aid packaging is used. Eligible students are funded, on a need basis and a first-come, first-served order.

The Basic Educational Opportunity Grant (BEOG) represents the floor of the package followed by any employment, loans and grants available in cases where the family contribution is less than 50% of the total cost of the education, the student may be eligible for a Supplemental Educational Opportunity Grant (SEOG).

This grant is used mainly for the student who without "an SEOG award, would be financially unable to attend the institution of his/her own choice." This kind of financial aid packaging ensures that any student who wishes to attend a postsecondary institution will have the opportunity to obtain the needed funding.

An example of the self-help concept:

- (1) Total Student Costs (Budget)
- (2) Subtract Resources:
 - a) Parental Contribution
 - b) Student Summer Savings
 - c) Students Assets
 - d) Other Resources

Initial Financial Need

- (3) Subtract:
 - a) Tuition Assistance Program (TAP) Grant or Estimate
 - b) Basic Educational Opportunity Grant (BEOG)

Unmet Need for Campus-Based Aid

- (4) Subtract:
 - a) Educational Opportunity Program (EOP)
 - b) National Direct Student Loan (NDSL)
 - c) College Work Study
 - d) Supplemental Educational Opportunity Grant (SEOG)
 - e) BCC—Grant in Aid
 - f) National Nursing Loan
 - g) National Nursing Scholarship

ZERO



RIGHTS AND RESPONSIBILITIES OF FINANCIAL AID RECIPIENTS

Student recipients of financial aid are the beneficiaries of money made available by a variety of agencies—federal, state, institutional, and/or private. The act of accepting a financial aid award signifies that the recipient knows about, understands, and is willing to comply with both the rights and the responsibilities involved with that award. Thus, it is the recipient's **RIGHT TO KNOW**:

- 1—What federal, state and institutional financial aid programs are available.
- 2—The deadlines for submitting application forms for each assistance program.
- 3—The cost of attending the College and the refund policy.
- 4—The criteria used by the College to select financial aid recipients and how the school determines financial need.
- 5—What resources (such as parental contribution) are considered in the calculation of financial need and how much of that need, as determined by the College, has been or will be met, and how (loan, grant and/or work-study).
- 6—How much of the financial aid will have to be repaid, and what portion is a grant (gift-aid). If the aid is a loan, the recipient should know what the interest rate is, the total amount that must be repaid, the payback procedures, the length of time allowed to repay the loan and when repayment is to begin.
- 7—How the College determines whether the student-recipient is making satisfactory progress and what happens if not.



It is the recipient's **RESPONSIBILITY** to:

- 1—Know and understand fully the financial aid program and one's specific financial aid package before signing the forms.
- 2—Make sure that all application forms are completed accurately and submitted, on time, to the right place.
- 3—Pay special attention to and accurately complete the application for student financial aid. Errors can result in long delays in the receipt of financial aid. Intentional misreporting of information on application forms for federal financial aid is a violation of law and is considered a criminal offense subject to penalties under the U.S. Criminal Code.
- 4—Return any and all additional documentation, verification, correction, and/or new information requested by either the Financial Aid Office or the agency to which the application is submitted.
- 5—Read and understand all forms that one signs and keep copies of them.
- 6—Accept responsibility for all agreements signed.
- 7—Notify the lender of changes in name, address or school status, if one has a loan.
- 8—Perform the work that is agreed upon in accepting a College Work-Study award.
- 9—Know and comply with the deadlines for application and/or reapplication for aid.
- 10—Know and comply with the school's refund procedures.

Satisfactory Academic Progress

If a financial aid recipient is not making satisfactory academic progress, he/she will no longer be eligible for financial assistance until satisfactory academic progress is being made. The definition of "academic progress" appears on page 18.

GRANTS

ELIGIBILITY	AMOUNT PER YEAR	WHERE/HOW TO APPLY
Tuition Assistance Program (TAP)		
Full-time students at any accredited college in New York State. Resident of New York State. No academic requirement.	\$200 to full tuition charge, depending on income.	New York State Higher Educational Services Corp. Tower Building Empire State Plaza Albany, NY 12230 Forms available in BCC Financial Aid Office.
Regents College Scholarship (Scholarships for nursing students and children of deceased or disabled veterans also available)		
Based on a competitive high school examination. For full-time students at any accredited college in New York State who are New York State residents.	Minimum of \$250. Depending on income and class level, a TAP award may also be received that could combine with the \$250 to equal the tuition charge.	New York State Higher Educational Services Corp. Tower Building Empire State Plaza Albany, NY 12230
Basic Educational Opportunity Grant		
Accepted or enrolled full-time or half-time students who demonstrate financial need.	From \$200 to \$1800. Cannot exceed one-half the cost of college expenses.	Forms available in BCC Financial Aid Office and in high school guidance counselor offices in the early spring.
Supplemental Educational Opportunity Grant		
For full-time or half-time students with exceptional need.	Up to \$1500 depending upon need and cost of college expenses; no more than one-half total assistance.	Student must submit a Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
Nursing Scholarship		
For full-time or half-time nursing students with exceptional financial need.	Up to \$2000 depending on need.	Student must submit Parents' Confidential Statement or Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
Law Enforcement Education Program		
Law enforcement personnel attending college on a full- or part-time basis.	Up to \$400 per semester.	Forms available in BCC Financial Aid Office.
BCC Foundation Grant		
Full-time or half-time students with financial need.	Varies according to individual need.	Submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
Educational Opportunity Program		
Full-time and half-time students with financial need and less than an 82 high school average.	Varies according to individual need. Average of \$250 per student per academic year.	Application available in the Educational Opportunity Program Office; Electrical Building No. 102

LOANS

ELIGIBILITY	AMOUNT PER YEAR	WHERE/HOW TO APPLY
New York State Higher Education Services Corporation Loan		
For full-time or half-time students with financial need. Student borrows on own signature from a participating bank.	Maximum of \$2500 per academic year for undergraduate students. No interest while in school. Repayment and 7% interest begin 9 months after leaving school. Up to 10 years to repay. A one percent loan fee is charged at the time the loan is received.	Most banks in New York State or New York State Higher Education Services Corporation, 50 Wolf Road, Albany, NY 12205. Forms available at local banks.
National Direct Student Loan		
For full-time or half-time students with financial need. Student borrows from the college on own signature.	Amount varies according to student's need. Total of \$5000 for an undergraduate program, but no more than \$2500 total for the first two years of college study. No interest while in school. Repayment at 3% interest begins 9 months after leaving school. Up to 10 years to repay.	Student must submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
Nursing Student Loan		
For full-time or half-time nursing students with financial need. Student borrows from the college on own signature.	\$2500 maximum per year not to exceed an aggregate of \$10,000. No interest while in school. Repayment and 3% interest begin 9 months after leaving school. Up to 10 years to repay.	Student must submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
Pauline Parker Loan		
For full-time students who are Broome County residents, under 25 years of age, and in financial need.	\$1000 maximum per year. No interest charge.	Forms available in BCC Financial Aid Office.
Emergency Loans		
For full-time or half-time students, through the support of the BCC Foundation.	\$50 maximum. No interest charge. Repayment in 30 days.	Forms available in BCC Financial Aid Office.
College Work-Study		
For full-time or half-time students with financial need.	Students may work up to 20 hours a week when classes are in session or up to 40 hours a week during vacations. Wage: Minimum \$2.64 an hour.	Student must submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.

EMPLOYMENT

TUITION

Tuition and fees are payable at the Student Account Office prior to each semester's registration according to a payment schedule released by the College.

The responsibility for payment rests upon the student, who will be billed prior to the start of each semester. Students will not be allowed to register or will be dismissed if the established due dates for payment are not met.

STUDENTS CARRYING 12 OR MORE CREDIT HOURS

—considered full-time students.

For New York State residents

With residency certificate \$365 per semester

Without residency certificate . . . \$730 per semester

For out-of-state residents \$730 per semester

After acceptance by the College, the student will be billed for an advance tuition deposit of \$50. This will be applied toward the tuition payment for the fall semester. This deposit may be refundable, and a new policy was being considered when this catalog was printed. Applicants should consult the Student Account Office in the Wales Building for the latest information.

STUDENTS CARRYING LESS THAN 12 CREDIT HOURS

—considered part-time students.

For New York State residents

With residency certificate \$29 per credit hour

Without residency certificate . . . \$58 per credit hour

For out-of-state residents \$58 per credit hour

Many students may qualify for financial aid, some of which is applicable towards tuition. **See Financial Aid section on pages 7 through 10.**

SEE TUITION REFUND POLICY ON PAGE 12.

RESIDENCY CERTIFICATE

To qualify for the resident tuition fee, a student is required by law to present once each academic year on or before registration a residency certificate indicating that he or she has been a legal resident of the State of New York for one year and of a county for six months.

Broome County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. This application must be completed and presented at the time of tuition payment.

Out-of-County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. The application must be completed, notarized and presented to the **County Treasurer of the County in which the student resides**. The County Treasurer will then issue a residency certificate to the student. This residency certificate must be presented at the time of tuition payment.

Part-Time Students must meet the same requirements as stated above. The application for residency certificate form is available at the Student Account Office and the Office of Continuing Education.

The completed residency forms are required once each academic year.

Failure to comply with this requirement will result in paying double tuition, not to exceed the limitations cited above.

FEES

Student Fees

STUDENT ACTIVITY

Full-Time Student	\$25 per semester
Part-Time Student	2 per semester

The activity fee entitles full-time day students to admission to varsity games, dances and parties, as well as a subscription to the student newspaper and the opportunity to participate in a varied program of co-curricular activities, including intramural athletics.

The Student Activity Fee is budgeted and administered by the Student Government and is not a college fee. It is apportioned as follows:

Campus publications	
Newspaper, Yearbook	15%
Program Board	
Speakers, Performers, Dances, Movies, Picnics,	
Special On and Off-Campus Programming	26%
Club Council	
27 funded clubs including most curriculum	
organizations	14%
Athletics	
11 male and female intercollegiate teams,	
coaches stipends, intramurals, administrative	
expenses	33%
United Student Government	
Administrative expenses, vehicle maintenance,	
class gift, audit, supplies	12%
	100%

Part-time day students (those taking fewer than 12 credit hours) pay a \$2 student activity fee per semester. This entitles them to admission to convocations and to issues of the Fulcrum, the student newspaper. It does not include, however, admission to varsity sports events or membership in student organizations or to copies of The Citadel, the student yearbook. The student has the option though of paying \$25 per semester and receiving the same privileges as full-time day students.

SEE FEE REFUND POLICY IN COLUMN 3 ON THIS PAGE.

ACCIDENT INSURANCE AND HEALTH FEE

Full-Time Student	\$15 per year
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Mandatory fee for all full-time day students for accident (\$9 per year) and health (\$3 per semester). Money collected from this fee is used to provide physicians services, drugs and medical supplies maintained in the Health Service for student use. The fee is non-refundable if a student withdraws from the college.

The accident policy covers the student for 12 months commencing September 2, 1980 for expenses incurred as a result of any accident, on or off campus. Maximum coverage is \$1000 per accident. Claim forms are available in the Health Service during the academic year and from the Vice-President for Student Affairs in the summer.

Students who withdraw and wish a refund of their accident policy must apply directly to the Insurance Company. This information is available either in the Student Account office or in the Health Service.

Compulsory Health Service Fee For

Part-Time Students	\$1 per semester
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MEDICAL INSURANCE

The College does not provide medical insurance, but it is available through a number of insurance companies including Blue Cross/Blue Shield.

GRADUATION/DIPLOMA FEES

Graduation	\$13
Diploma (part-time evening only)	8
Certificate (part-time evening only)	8

Paid during semester preceding graduation and is refundable if the student does not graduate or earn diploma or certificate.

ALUMNI LIFETIME MEMBERSHIP

Membership in the Broome Community College Alumni Association is optional. The lifetime dues are payable during the semester preceding graduation, and they entitle graduates to complete Association benefits.

College Fees

Application	\$10
Credit by Examination	See page 14
Late Registration-payment fee	10
Returned check fee	5
Transcript fee	1
Chemistry Laboratory	\$5 per semester
For all students taking chemistry laboratory courses with 200 numbers.	

Books, Supplies, Uniforms

Students provide at their own expense the necessary books and instructional materials. These may be purchased at the College Book Store maintained by the Faculty-Student Association for the convenience of the students. The cost varies, depending on the curriculum, from about \$180 to \$300.

In the Health Science curriculums students will provide, at their own expense, their own transportation to off-campus locations for necessary clinical and other experience.

In addition, some curriculums require uniforms. Among these are Nursing, Radiologic Technology, Medical Laboratory Technology and Medical Office Assistant. Gym clothes are necessary for physical education classes. Dental instruments and uniforms for Dental Hygiene students cost approximately \$350 to \$400.

Refund Policies, Procedures

TUITION REFUND POLICY

Students who withdraw from classes during the first three weeks of a semester will be entitled to tuition refunds on the following basis—100% refund during the first week, 50% during the second week and 25% during the third week. After three weeks of classes there will be no refunds. See College Calendar on page 121 for additional information on dates for tuition refunds.

FEE REFUND POLICY

The student activity fee is refundable according to the same schedule as tuition. See "Tuition Refund Policy" above.

REFUND PROCEDURE

An application for refund of tuition and fees must be made in person and in writing in the Registrar's Office (W-206). The application must be on the College form provided. The date on which the application is filed is considered the official date of the student's withdrawal and any refund to which the student may be entitled is computed using that date.



REQUIREMENTS FOR GRADUATION

COMMON REQUIREMENTS FOR ALL FOUR DEGREES GRANTED BY THE COLLEGE

1. Successful completion of all courses for the degree as contained in this Catalog.
2. A 2.00 cumulative GRADE POINT AVERAGE in those courses applicable to the degree.
3. Recommendation of the faculty for the awarding of the degree.
4. Satisfaction of all obligations to the College.

THE ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

This degree is awarded to graduates of curriculums in these fields of study:

- | | |
|--------------------------------------|--|
| Accounting | Fire Protection Technology |
| Automotive Service Specialist | Individual Studies |
| (Final New York State approval was | Industrial Safety and Occupational Hygiene |
| being awaited when this catalog | Industrial Technology |
| was printed) | Marketing Management and Sales |
| Chemical Engineering Technology | Mechanical Engineering Technology |
| Child Care | *Medical Laboratory Technology |
| Civil Engineering Technology | Medical Office Assistant |
| Criminal Justice—Police | *Medical Record Technology |
| Data Processing | Nursing |
| Data Processing—Technical | Office Services Assistant |
| Dental Hygiene | Paralegal Assistant |
| Electrical Engineering Technology | *Radiologic Technology |
| Engineering (Industrial) Secretarial | |
| Executive Secretarial | |

5. Curriculum Requirements
 - a. The minimum number of credits in a student's major field as determined by each academic department. These are courses intrinsic to and required by the various curriculums.
 - b. A minimum of 20 credits in Liberal Arts and Sciences courses will include:
 - 1) Social Sciences: a minimum of 6 credits
 - 2) Natural and Physical Sciences (including mathematics): a minimum of 6 credits
 - 3) Humanities: a minimum of 6 credits in English (may include a maximum of 3 hours in speech)
 - c. Satisfactory completion of all courses in a curriculum or as approved in a department.
 - *d. Summer clinical experience required for graduation in curriculums noted.

THE ASSOCIATE IN SCIENCE DEGREE (AS)

This degree is awarded to graduates of the Business Administration, Computer Science, Engineering Science and Individual Studies curriculums and the Science Option in Liberal Arts and Sciences.

5. Curriculum requirements:
 - a. At least 30 credits in the humanities, natural sciences, mathematics, the social sciences.
 - b. Physical Education—2 credits (for Liberal Arts and Engineering Science students only).

THE ASSOCIATE IN ARTS DEGREE (AA)

This degree is awarded to graduates in the Liberal Arts and Sciences curriculum.

5. Liberal Arts and Sciences requirements distributed as follows:
 - a. English: a minimum of 12 credits, of which 6 shall be in composition and 6 in literature.
 - b. History: a minimum of 6 credits in approved courses.
 - c. Humanities: a minimum of 6 credits (6 in philosophy or 6 in a foreign language).
 - d. Mathematics: Students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics. . . . Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics. . . . Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.
 - e. Natural and Physical Sciences: a minimum of 8 credits.
 - f. Social Sciences: a minimum of 6 credits.
 - g. Electives: 16 credits minimum. A maximum of 12 credits may be taken outside the offerings in Liberal Arts and Sciences with the approval of the dean of the division.
 - h. Physical Education: 2 credits. Exceptions to this requirement may be made by the dean of Liberal Arts for valid reasons.
 - i. Satisfactory completion of all courses in a curriculum or as approved in a department.

THE ASSOCIATE IN OCCUPATIONAL STUDIES DEGREE (AOS)

This degree is awarded to graduates of the Tool and Die Making curriculum and requires a minimum of 64 semester credit hours.

Final New York State approval was being awaited when this catalog was printed.

CREDIT BY EVALUATION

Non-Traditional Study

Broome Community College acknowledges that it is necessary and worthwhile to provide methods for considering various non-traditional activities for credit. By documenting and demonstrating that learning has taken place through various prior experiences, students may be awarded academic credit. Various examinations may also be taken for credit.

The Dean of Curriculum is the initial contact point for students interested in obtaining more information about non-traditional study, examination programs, and their suitability for various student purposes. Students will be assisted in determining whether or not such study or examinations would be worth pursuing for their educational objectives. The appropriate academic department is responsible for integrating any credit achieved in this manner into the student's academic program.

Advanced Placement Examination (AP)

The College will recognize for credit the AP examinations of the College Entrance Examination Board. A score of 3 or above is acceptable for credit upon departmental approval. Laboratory courses may require additional lab work for full credit for a college course.

Credit awarded will be handled as transfer credit.

College Proficiency Exams (CP)

The CP exams of the University of the State of New York will be recognized for credit upon approval by the appropriate department. Credit awarded will be handled as transfer credit.

College Level Examination Program (CLEP)

The College will recognize successful achievement at or above the 50th percentile on CLEP exams in accordance with SUNY and American Council of Education guidelines. Approval of credit for degree requirements or electives is determined by the appropriate department. Credit approval will be handled as transfer credit.

BCC Credit By Examination (CBE)

The College in many instances will provide credit by examination for knowledge gained outside the traditional classroom situation. Guidelines for this procedure are available from the College's department chairpersons. There will be a fee charged for the exam. If a BCC stu-

dent receives an F grade after normal completion of a course, no credit by examination may be given in that subject for that given grading period.

Special Individual Assessment

The College will evaluate for credit various types of learning acquired outside the usual classroom environment and a fee is required, based on credit hours requested. Particular criteria for awarding credit may be applied by an academic department. Approval of credit is the responsibility of the appropriate department. Students must identify what has been learned. Contact the Dean of Curriculum for additional information.

Special Assessment of Group Sponsored Learning

The College will evaluate for credit various types of learning acquired through participation in learning experiences or training provided by businesses, industry, unions, professional societies, governmental agencies or the military. Particular criteria for awarding credit may be applied by an academic department, and approval of credit is the responsibility of the department. Contact the Dean of Curriculum for additional information.

PROGRAMS OF THE COLLEGE

DEGREE PROGRAMS

Graduates of Broome Community College receive associate degrees, and the courses of study fall into six general categories—technical, business, computer studies, liberal arts, health sciences and a cluster of others. Liberal arts courses are included in all curriculums, as it is believed that students need more than technical competence to understand people and their daily working and personal inter-relationships.

Applicants to the College should consider carefully the type of program they wish to pursue, for the nature of the offerings makes it difficult for a student to switch from one curriculum to another after commencing studies.

Engineering and Engineering Technology

In the area of technical education, the College offers five programs. One, Engineering Science, is in effect the first two years of an engineering curriculum, and students who do satisfactory work in it should experience little difficulty in transferring to engineering colleges at the third-year level.

The other four are designed to train engineering technicians in the fields of Chemical Engineering Technology, Civil Engineering Technology, Electrical Engineering Technology and Mechanical Engineering Technology. Students in these programs are prepared for employment in various types of technical work immediately after graduation.

In addition, the College offers two programs for part-time students in the evening. These are Industrial Technology, which has six major areas of study to choose from, and Fire Protection Technology.

Business

The Business curriculums are designed primarily to prepare graduates for immediate employment in one of five fields—Accounting, Marketing Management and Sales, Engineering Secretarial, Executive Secretarial and Office Services Assistant. In addition, there is a sixth option, Business Administration, that combines more university parallel preparation with a minimum of job-oriented courses. This program is intended for the person who plans to continue his/her college education for a baccalaureate degree, even though he/she may want to work for a while before transferring to a four-year college.

It is possible to transfer from all programs. But because each student's transfer credits are evaluated by the four-year institution, the number of credits accepted can vary.

Computer Studies

The Computer Studies Department at Broome Community College offers four degree programs in the computer field—Computer Science, Data Processing, Data Processing Technical, Industrial Technology with Computer Emphasis. The latter is for evening part-time students. The Computer Science program leads to the Associate in Science degree while graduates of the other three receive the Associate in Applied Science degree.

Liberal Arts and Sciences

University parallel curriculums in Arts and Sciences prepare students for transfer to four-year colleges or universities. While the aim of liberal learning is to broaden human perspective and deepen understanding through study of philosophy, history, literature and the arts, students who identify career/professional goals early can begin to develop appropriate academic concentrations. Liberal Arts and Sciences also offers degree programs for those seeking immediate employment. Please refer to the Career Models on pages 44 and 45 in this catalog.

Health Sciences

Opportunities for men and women interested in the health sciences field are provided in six areas—Dental Hygiene, Medical Office Assistant, Medical Record Technology, Nursing, Medical Laboratory Technology and Radiologic Technology. Graduates are prepared to work immediately after graduation in physicians' or dentists' offices, laboratories or hospitals.

Graduates of these programs are also qualified to take whatever licensing examinations their professions require.

Others

The College offers degree opportunities in six other academic areas—Child Care, Criminal Justice, Individual Studies, Industrial Safety and Occupational Hygiene, Paralegal Assistant, and Automotive Service Specialist(*). All lead to the Associate in Applied Science degree, and Individual Studies students may earn either that degree or the Associate in Science, depending on their program of study. A Tool and Die Making curriculum leads to an Associate in Occupational Studies degree.*

DIPLOMA AND CERTIFICATE PROGRAMS

Broome Community College also has diploma and certificate programs which are less than two years in length, have more specific objectives than the associate degree offerings, and consist of about one year of college credit. Some are designed to prepare students for jobs that require specialized higher education, but not necessarily a college degree; some provide students with an opportunity to upgrade their academic backgrounds or expand their qualifications for a particular field of study; and some offer college credits and additional training to people already working in the field.

Most of the diploma and certificate offerings carry college credits, and they can lead a person into some of Broome Community College's degree-granting curriculums. They can be taken on a full-time or part-time basis, and most of them are offered in the evening although some are available through day classes. No specific high school courses are required for enrollment.

For further details, a listing of courses and literature about most of these diploma and certificate programs, contact the BCC Office of Continuing Education (Wales Building, Room 108 or phone 772-5012).

Diploma Programs

- Business Emphases
 - Accounting
 - Computer Studies
 - Management
 - Marketing/Sales/Retailing
- Child Care
- Criminal Justice
- Fire Protection Technology
- Industrial Technology Emphases
 - Applied Mathematics
 - Chemical
 - Civil
 - Computer Studies
 - Electrical
 - General Technical Studies
 - Industrial Safety and Occupational Hygiene
 - Mechanical
 - Production Management
- Liberal Arts
- Paralegal Assistant

Certificate Programs

- Dietetic Assistant
- General Office
- Interior Design
- *Machinist Related Instruction

*The Tool and Die Making and Automotive Service Specialist curriculums and Machinist Related Instruction program were awaiting final state approval when this catalog was printed.

COOPERATIVE PROGRAMS WITH OTHER COLLEGES

Broome Community College has direct transfer agreements with a number of four-year colleges to facilitate the acceptance of BCC graduates into the third year of study. The number of colleges with which BCC has such agreements is increasing each year. Further details are available in the Counseling and Student Development Center (Wales Building, Room 200).

With SUNY Binghamton

Transfer Agreement

All Broome Community College students who have graduated or who will graduate with an AA or AS degree with a grade point average of at least 3.0 will be admitted, upon application, as matriculated students in Harpur College of SUNY at Binghamton. Those students graduating with the above degrees but with a grade point average between 2.6 and 3.0 are usually admitted. Others, including those with an AAS degree, should contact the SUNY at Binghamton Office of Admissions. Admitted students will be granted junior-year standing upon presentation of 56 or more transferable credits.

Cross-Registration

BCC students may cross-register at Binghamton for one course each semester. The courses for which they cross-register must be courses that are not available at Broome Community College. No additional tuition is necessary.

Joint Degree

The joint-degree program enables students in SUNY at Binghamton's Bachelor of Arts degree program to simultaneously earn an Associate in Applied Science degree at BCC.

Additional information on these programs is available in the office of the Dean of Academic Services (Wales Building, Room 202).

With Keystone Junior College

BCC students may also cross-register at Keystone Junior College in LaPlume, PA. for one course each semester. The courses for which they cross-register must be ones that are not available at Broome Community College, and they can take them without paying additional tuition. Additional information is available in the office of The Dean of Academic Services (Wales Building, Room 202).

Guaranteed Transfer Program with State University of New York

Students who graduate from Broome Community College with Associate in Arts or Associate in Science degrees are guaranteed admission, at the third-year level, to a four-year college of the State University of New York. This guarantee has some limitations and details are available in the Counseling and Student Development Center (Wales Building, Room 200).

One-Plus-One Programs

Broome Community College has One-Plus-One Programs with other two-year colleges to enable a student to attend BCC for one year and then transfer to the other college for the second year for the Associate in Applied Science degree. This program permits students to begin studying at BCC for a degree in a field not offered at this College. By taking the BCC courses that one needs for the particular degree involved, residents of Broome County can enjoy the advantages of living at home during one year of their college attendance. Students taking these One-Plus-One Programs are liberal arts students at Broome Community College because most of the courses they take at BCC are liberal arts courses.

The following colleges offer transfer opportunities for students who have completed the appropriate one year study at BCC:

Delhi Agricultural and Technical College

Hotel Restaurant Technology

Construction Technology

Architectural Technology

General Agriculture

Animal Husbandry-Dairy

Canon Agricultural and Technical College

Agronomy/Horticulture

Agricultural Engineering

General Agriculture

Animal Husbandry

Dairy and Food Service

Mortuary Science

Science Laboratory Technology-Biology Option

Paul Smith's College

Hotel and Restaurant Program

SUNY College of Environmental Science and Forestry
at Wanakena, N.Y.

Forest Technology

**FOR DISPLAY OF COURSES TO BE TAKEN AT
BROOME COMMUNITY COLLEGE FOR THE
FIRST YEAR OF THESE PROGRAMS, SEE PAGE
47.**



STUDY ABROAD PROGRAMS

Broome Community College is a member of the College Consortium for International Studies, a group of 30 colleges spreading geographically from Canada to Florida and from California to Maryland. This consortium, during the 1980-81 academic year, will offer students about 65 overseas academic programs in 27 foreign locations.

The programs range from structured, formal courses at affiliated schools and institutions abroad, to service-learning and contract-independent study courses. Students may choose from intersession, short-term, semester and year-long programs.

Formal Programs

The consortium provides formal, structured programs lasting for a semester, a year or two years, in a variety of institutions in Denmark, England and Israel. Students study a full semester program (usually 15 to 18 credits) that is arranged prior to their departure at affiliated schools, institutions, colleges or universities abroad. The subject areas range from liberal arts courses to specialized programs, such as criminal justice, languages and human services. Programs are also available in Spain and Germany.

Many BCC students will find their academic and personal lives enriched through a cultural experience difficult to match in a conventional two-year course of study in this country. BCC maintains close communication with consortium offices in New York, London and Jerusalem to facilitate the placement of students in qualified institutions abroad.

Contract/Independent Study

Students studying independently enter into contractual arrangements with their mentors representing the institution. The students, guided by their mentors, identify the specific learning objectives for their contract and specify the learning activities through which these objectives are to be obtained. Learning activities may include individual and group seminars and tutorials, assigned readings and/or formal classes.

In addition, the learning contract clearly spells out the evaluation procedures to be followed: usually a combination of papers, examinations, projects, tapes. The evaluation methods, as all contract components, are agreed upon in advance (and prior to the student's departure for his study program abroad) and can be altered or modified only by mutual agreement by the mentor and student.

BCC's contract programs provide students with an avenue to benefit from unstructured learning and individual guidance while studying abroad. It should be noted that contract learning, particularly when engaged in overseas, is a very rigorous academic undertaking that requires imagination, self-discipline, planning and foresight in addition to the usual qualities of a good student. It should be considered only by serious students.

Interession, Short-Term Programs

During each academic year the consortium conducts a wide variety of interession and short-term programs in January, during the spring recess and in the summer months. Students at BCC who have been introduced to study abroad through these short-term programs, usually two to three weeks in length, often then decide to study overseas for a semester or year.

The short-term courses have grown in scope, as well as in number. They have enabled criminal justice students to study and compare the operations of the metropolitan police forces of Amsterdam, Paris and London. Other short-term program participants have had a chance to evaluate child welfare practices in the Scandinavian countries, or compare the nursing and health care practices in Israel to those in the U.S.

Admission to Programs

Admission to the College does not automatically insure admission to BCC's programs overseas; separate application must be made to the consortium. Students will be evaluated on their academic ability, motivation, maturity and potential adaptability to a foreign culture. In addition to BCC approval, interviews with personnel from affiliate consortium institutions may be required.

Credits, Transcripts and Tuition

Students register at BCC and pay the appropriate tuition, which in many cases covers the instructional costs abroad. Students are monitored through consortium offices in London and Jerusalem, or through individual mentors. Upon the successful completion of the formal program or after fulfillment of the contract, students will receive a BCC transcript reflecting the grades achieved or the course equivalents or the work done through the contract, greatly facilitating transfer of credits to other American institutions.

Students may earn up to 18 credits per semester, leading to an associate degree. Credits for interession/short-term programs range from one to six, depending on the time spent abroad and the instruction offered in the program.

For additional details about any of the above programs, students should contact the Study Abroad Program Office at Broome Community College (Titchener Hall, Room 121—Phone (607) 772-5094).

SPECIAL CAREER PROGRAMS

The following curriculums at the College are conducted under the Department of Special Career Programs:

- Child Care (AAS degree)
- Criminal Justice (AAS degree)
- Dietetic Assistant (Certificate Program)
- Fire Protection Technology (AAS degree)
- Individual Studies (AAS or AS degree)
- Industrial Safety and Occupational Hygiene (AAS degree, Diploma Program)
- Paralegal Assistant (AAS degree, Diploma Program)

MINI COURSES

Broome Community College offers a wide variety of non-credit, short courses, mostly in the evening. See page 67.

DEVELOPMENTAL STUDIES

A significant number of incoming freshmen (full and part-time students) enter college with inadequate preparation in basic skill—reading, writing, and mathematics. Because of this, some will need more than four semesters of full-time study to earn an Associate Degree. Broome Community College takes seriously its obligation to assist students with such deficiencies. Here are some important features of our program:

Diagnostic Testing: Every entering full-time student is given a battery of diagnostic tests—one in reading, one in writing, and one in mathematics. Part-time students are also encouraged to take these tests.

Course Placement: Following an analysis of student performance on these tests, individual advice is given on course selection. Every effort is made to place students in courses in which they can succeed.

Credit/Non-Credit: Some of these courses are credit-bearing and others are not. Typically, students with skills deficiencies will have a schedule which includes both credit and non-credit courses. Students must pay close attention to catalog information pertaining to these courses and consult their curriculum chairpersons on acceptability of credit.

The Courses:	Catalog Page	Title	Credit	Comment
ENG 100	87	Basic Language Skills	3	As advised: satisfies half the composition requirement
RDG 090	108	Reading Fundamentals	3	As advised
RDG 100	108	College Reading	3	As advised
RDG 110	109	Rapid Reading	1	Elective Credit
RDG 120	109	Speed Reading	1	Elective Credit
LRS 101	109	Learning Skills: Time Scheduling & Concentration	.5	Elective Credit
LRS 102	109	Memory and Exams	.5	Elective Credit
LRS 103	109	Learning Skills: Textbook Mastery	.5	Elective Credit
LRS 104	109	Listening and Notetaking	.5	Elective Credit
LRS 110	109	Learning Skills: The Research Paper	1	Elective Credit
LRS 120	109	The Art of Thinking	1	Elective Credit
MAT 003, A, B, C	94	Basic Math Review	0	As advised
CHM 102	74	Preparatory Chemistry	4	As advised
PHY 100	105	Preparatory Physics I	4	As advised
PHY 101	105	Preparatory Physics II	4	As advised
SAC 295	91	Seminar in Human Potential	3	As advised

Learning Skills Centers

The skills centers are staffed by experienced professionals who are knowledgeable about and committed to assisting students with their learning problems. The Learning Resource Center houses the three centers:

Mathematics—Basement

Reading—Second Floor

Writing—Second Floor

GRADING INFORMATION

Because this grading policy went into effect for the Fall Semester of 1979, grades earned by students at the College prior to that date will remain as recorded.

Grades	Honor Points Per Credit Hour	Explanation
A	4	Outstanding achievement of course objectives
B	3	Significant achievement
C	2	Satisfactory achievement
D	1	Minimal satisfactory achievement
F	0	Failure to meet course objectives or dropped after 10th week
S	—	Satisfactory— (For certain
U	—	Unsatisfactory— courses only)
W	—	Withdrawal from a course between the 4th and 10th weeks inclusive (See "W" Grade below)
I	—	Incomplete due to special circumstances (See "I" Grade below)
IP	—	"In Progress"—for courses in which student is permitted more than one semester to complete
AU	—	Audit—not to be recorded as a grade (See "Audit" below)
T	—	Transfer credit from an accredited college

"S", "U" and "IP" Grades

The S or U grade and IP grade will apply only to specific courses determined by the appropriate departments and approved by the Vice-President for Academic Affairs. Such courses will not affect the Grade Point Average (GPA).

"W" Grade

It is the student's responsibility to initiate action to receive a grade of W between the 4th and 10th weeks inclusive. If no action is taken before the 11th week and the course is dropped, an F (or U) will be entered on the transcript. For 7½ week courses, an F (or U) will be entered on the transcript if the course is dropped after the 5th week. For 5-week courses an F (or U) will be entered on the transcript if the course is dropped after the 3rd week.

"I" Grade

A student who receives an I grade shall, within two weeks after the last class of that semester, contact his or her instructor to arrange for completion of unfinished work, in accordance with agreed upon time limits that are not to exceed one year. The instructor will then notify the registrar of the arrangements and, after the student has completed the work, of the subsequent grade to be assigned. If the student does not meet the time limit, the instructor shall direct the registrar to record the appropriate grade.

If the student does not contact the instructor during the two-week period at the end of the semester, the registrar shall record the appropriate grade as directed by the instructor.

Audit

The term "Audit" shall not be considered a grade but an "opportunity." For persons auditing a course, the letters AU will appear next to the course name on the transcript with a message statement explaining the meaning of the designation. No grade shall appear in the grade column on the transcript.

Students are encouraged to use the option of taking courses on an audit basis. Any student who completes a course by auditing will have AU recorded on his/her record in place of credit grades. He/she may not receive credit for it later, unless he/she re-registers in the course or challenges it according to the existing rules for credit-by-examination.

Students who register in a course for audit are expected to have the necessary prerequisites. In this respect students are encouraged to make full use of the College's counseling services, but the ultimate decision whether or not to enroll for audit shall be the student's responsibility. Consideration may be given to a student's request for transfer from credit to audit status or vice-versa. The end of the third week of classes is the deadline for such transfer.

Full-time students may audit courses with no additional charge, but they need approval of their department chairperson. **For part-time students**, the regular tuition schedule applies (\$29 per credit hour for New York State residents and \$58 per credit hour for out-of-state students). New York State residents who are **60 years of age or older** may audit courses without charge on a space available basis.

Academic Dismissal from the College and Satisfactory Academic Progress

A student is not making **satisfactory academic progress** and will be dismissed from the College for academic reasons, if he/she has:

- 12 or more credit hours of W grades before completing 24 credit hours
- a cumulative grade point average less than 1.25 after completing 24 or more credit hours.
- a cumulative grade point average less than 1.5 after completing 42 or more credit hours.

Note—"Completing" in this context means a grade of A, B, C, D or F has been recorded.

A student who receives notification of his/her academic dismissal from the College and feels that there are extenuating circumstances may submit a petition to his/her department chairperson to rescind this action. This petition must be initiated within 10 days of the student's notification of dismissal. Academic dismissal action will not be rescinded without the approval of the student's chairperson **and** the Vice President of Academic Affairs or designee.

A student who is academically dismissed from the College may take no more than 9 credit hours during the following semester (proportionally fewer credit hours in a session less than 15 weeks) or must wait until one semester has elapsed before being eligible for re-admission.

If the student chooses to take 9 or fewer credits of course work following dismissal, the course work must be jointly selected by the dismissed student and the department chairperson of the prospective curriculum to which the student will seek admission or another appropriate academic official. This joint selection procedure is necessary to promote the student's future success.

GRADING INFORMATION (Continued)

Mid-Term Grades

Only the D, I, F and U grades will be reported to students and their advisers at mid-term.

Repeating Courses

If a course is repeated, the higher grade will enter the grade point average. If a required course is failed, the department or the dean may allow the student to substitute an equivalent or similar course, rather than repeat the failed course. In such cases the higher grade will enter the grade point average.

Grade Point Average

Each grade carries a specified number of honor points—4 for an A, 3 for a B, 2 for a C, 1 for a D. To determine one's grade point average, multiply the number of honor points earned, according to the letter grade, by the number of credits for the course. Add these together and divide this sum by the total number of credits taken.

For purposes of graduation eligibility, only those courses required for the degree will be included in the calculation of the grade point average.

President's List and Dean's List

Full-time students who have a semester grade point average of 3.80 or better will be named to the President's List. Such students must successfully complete a minimum of 12 hours, and courses which use the S or U grade may not be among the 12 hours.

Full-time students with a semester grade point average between 3.50 and 3.79 inclusive will be named to the Dean's List. Such students must successfully complete a minimum of 12 hours, and courses which use the S or U grade may not be among the 12 hours.

Part-time students can earn a place on the President's or Dean's Lists by having the appropriate cumulative grade point average for their most recent semesters that include at least 12 credit hours.

Graduation with High Honors or Honors

Students who graduate with a cumulative grade point average of 3.80 or better will receive the distinction of graduating with "High Honors" and those who graduate with a cumulative grade point average between 3.50 and 3.79 inclusive will graduate "with Honors."



OTHER ACADEMIC PROCEDURES

Attendance Regulations

Attendance in all scheduled course activities is expected as part of each student's responsibility for his/her own education. The policy of the College is that the student's academic achievement will determine grades and not just the statistics of presence or absence.

Student Responsibility: Each student is responsible for any work missed regardless of reason for any absence in class.

Instructor Responsibility: Each instructor is responsible for relating the significance of attendance to the course's objectives and to inform the students of this significance in the first class meeting.

Department Responsibility: Within the spirit and framework of college policy, each department may develop its own guidelines to meet its needs. Such guidelines are subject to the approval of the vice-president for academic affairs.

Student Academic Appeal Procedure

Broome Community College has established a procedure to provide students an opportunity to appeal grades in any particular course(s) or academic dismissal. Copies of this Student Academic Appeal Procedure are available in the Office of the Dean of Academic Services (W-202), and the policy also appears in the Student Handbook.

Late Registration

An applicant may not register later than one week after the beginning of each semester except by permission of the Vice-President for Academic Affairs. A late fee will be charged.

Withdrawal from the College

Broome Community College has committed itself to a philosophy of providing whatever assistance is necessary to aid the student in completing his/her academic goals. Students are strongly encouraged to seek academic and personal counseling prior to any withdrawal.

Students who decide to withdraw from the College must complete the proper termination forms available in the Registrar's Office or Counseling Center. Failure to comply may cause the individual to lose any possible refund of fees.

Length of Curriculum

Most associate degree programs are designed to be completed in two years. The college year is divided into two semesters of 15 weeks each plus an evaluation week. Some students may choose or be required to take more than four semesters to earn their degrees. Radiologic Technology students and Medical Laboratory Technology students have special clinical laboratory experience in the summer of both their freshman and senior years.

Independent Study

Many academic departments of the College offer "Independent Study" courses which are arranged between an individual faculty member and a motivated student. The student has the responsibility to make appropriate arrangements with a faculty mentor and to secure the permission of the department chairperson before registering for independent study.

Independent Study courses are **not** intended to replace regular courses which the student was unable to schedule or which he did not complete. Rather, these courses provide an opportunity for the serious student who desires to expand his academic background beyond the scope and the depth usually found in a regular course. (See course description section for offerings.)

Absence Due to Religious Beliefs

Section 224-a of the State Education Law reads:

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he is unable, because of his religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.

2. Any student in an institution of higher education who is unable, because of his religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If classes, examinations, study or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section.

6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his rights under this section.

6-a. A copy of this section shall be published by each institution of higher education in the catalog of such institution containing the listing of available courses.

7. As used in this section, the term "institution of higher education" shall mean schools under the control of the Board of Trustees of the State University of New York or of the Board of Higher Education by the City of New York or any community college.



THE CECIL C. TYRRELL LEARNING RESOURCES CENTER

The Cecil C. Tyrrell Learning Resources Center provides a wide variety of learning resources. Housed in the center are the Library, the Audio Visual Department, the Mathematics Learning Center, the Writing Center, the Reading and Study Skills Center and an Engineering Sciences and Technologies Learning Center, as well as offices and classrooms.

A staff of professional, technical and clerical specialists offers the students a broad range of services designed to meet their academic needs. Typical library services include lending of materials, information services, access to other learning resource centers, interlibrary loan service, assistance in research techniques, and instruction in the use of materials and equipment. A coin operated photocopier is also available.

The Learning Resources Center's primary function is to support and supplement the academic programs of the college and to provide a center for serious study, research and learning. Students are encouraged to use its facilities, materials, and services fully, but properly. Requests for information services and assistance are welcomed by the staff.

The facilities have a capacity of nearly 900 users. Individual carrels, lounge furniture, multiple person tables and stools, and a limited number of small group study rooms are available. Audio-visual equipment including projectors, tape and record players, micro-film reader/printers, as well as more specialized machines, are located in the center for student use. Some electric and manual typewriters are also available.

The Learning Resources Center was constructed in 1967-68 and named for the College's founding president in 1972, the year he retired after 26 years in the position. The building is an attractive and modern three-story structure, with more than 40,000 square feet of space devoted to its learning facilities.

The Learning Resources Center collections offer many different types of print and nonprint materials carefully selected to meet the academic needs of students at college level. The print collections consist of over 53,000 books, 500 current periodicals and

backfiles, plus over 7,000 pamphlets.

More than 1,000 audio recordings, slides, filmstrips, maps, microfilms, multimedia kits, and other types of media add several thousand more items to the collection. An extensive file of college catalogs is maintained.

Most materials including magazines may be borrowed for use outside the center, although some restrictions are placed on reference and reserve materials. The basic loan period for books is two weeks, and for magazines and audio visual materials, one week.

Some loan periods may be extended if requested before the date the materials are due back in the center and the items not in demand. Overdue fines are not charged as a rule, but the college reserves the right to do so with proper notification.

Library cards will be issued to students upon request, but are not required for borrowing materials. Proper identification is necessary, however. Failure to return borrowed materials promptly upon notice can result in withholding of grades, transcripts and other services.

Lost and damaged materials must be replaced or paid for at current replacement costs, and the borrower is responsible for all materials charged out on his/her card.

The center is open for full service during the following hours:

Fall and Spring Semesters

Monday—Thursday	8 am to 10 pm
Friday	8 am to 4:30 pm
Sunday	4 pm to 10 pm
Saturday	12 noon to 5 pm

Holiday and Intersession

Monday—Thursday	8 am to 5 pm
Friday	8 am to 4:30 pm

Summer Session

Monday, Wednesday, Thursday	8 am to 9 pm
Tuesday	8 am to 5 pm
Friday	8 am to 4:30 pm

Counseling and Student Development Center

The Counseling and Student Development Center provides many services for students, whether they are enrolled full-time or part-time. Students can meet with counselors in a non-threatening and informal atmosphere, as they seek to develop their potential, form realistic goals, and understand themselves emotionally and intellectually. The Center is equipped to help students:

1. Understand their basic needs in terms of social, vocational and emotional adjustment to the college setting.
2. Establish realistic educational goals and appropriate methods of achieving them.
3. Assess their strengths and weaknesses to enable them to more effectively deal with academic and personal problems.
4. Better understand their role and that of the College in the higher educational process.
5. Obtain information about transfer and career opportunities, as well as assistance in dealing with academic problems.
6. Grow in their personal development and determine appropriate values through instruction in human development courses.

The Counseling and Student Development Center, located on the second floor of the Wales Building, is staffed by professional counselors and open to all BCC students, full-time and part-time. The Center is open from 8 a.m. to 4:30 p.m., Monday through Friday, and evening hours are established during the academic year. Students should become acquainted with the Center by stopping in at their convenience or calling for an appointment (772-5185). A special brochure is available at the Center, giving details about the services.

CAREER AND LIFE PLANNING

Broome Community College offers an opportunity for students to explore interests, strengths and values in both an individual and group setting. Knowing "what makes one tick" is the first step in understanding goals related to self fulfillment and to the world of work. The Counseling and Student Development Center can help in the process of self-evaluation and has a number of resources, audio-visual aids, testing procedures and techniques used in the process.

PERSONAL COUNSELING

Counseling is also available for students experiencing social, personal and family problems. Counselors may make referrals to appropriate community agencies, if that should be necessary and mutually agreeable. All counseling is strictly confidential.

ACADEMIC COUNSELING

Counselors are available to help students put their academic efforts into the proper perspective by analyzing their study, social and work habits to enable them to utilize their time in the most efficient way.

TRANSFER TO 4-YEAR COLLEGES AND UNIVERSITIES

Broome Community College has developed a fine reputation for its successful preparation of students for study at senior institutions. Students desiring to continue their education are encouraged to consult with a counselor in the Counseling and Student Development Center, their faculty advisor, or department chairperson for assistance in selecting a program and/or institution that is appropriate to their goals, abilities and aspirations.

To these ends, the College conducts the Transfer Emphasis Program, which consists of visits to the campus by representatives of four-year schools to recruit and advise potential transfer students. Taking place for two weeks, usually in November and March, these visits are designed to expedite the information process necessary to insure a smooth transition between community college and various four-year programs. The representatives, generally from admissions offices, discuss life on their campuses, financial assistance possibilities and activities available, in addition to the traditional explanations of all their academic programs.

Applications for the **State University of New York** colleges and university centers are available in the Counseling and Student Development Center. Students should apply directly to all **other colleges** (non-SUNY units) by requesting an application and any other pertinent data from the admissions office of the desired college.

All students should arrange at the BCC Registrar's Office to have copies of their transcripts forwarded to the admissions offices of the colleges to which they are applying. This will insure proper transfer of applicable credits. Any requests for references and recommendations may be forwarded to the Counseling and Student Development Center, and all acceptances and rejections of applications should also be reported to the Center.

Any questions or problems regarding transfer should also be directed to the Counseling and Student Development Center, which can help students determine if another college is accredited. For information on special transfer opportunities, see page 16.

TESTING

The Counseling and Student Development Center of students the opportunity to engage in a testing program. When appropriate, it can be arranged for a student to take a variety of tests including personality and interest inventories. Cognitive style mapping is also available to help students better understand their individual learning preferences. The tests can help students develop self awareness and improve their decision-making ability.

HUMAN DEVELOPMENT COURSES

Courses are offered which provide students with an opportunity to examine their values, attitudes, beliefs and abilities. The courses also offer an opportunity to learn how these factors affect the quality of relationships with others. In addition, the students examine the challenge and problems of society as they relate to their development. All courses are transferable for credit.

SPECIAL WORKSHOPS AND SEMINARS

The Center offers a variety of workshops and seminars throughout the college year. Those that have been offered cover such topics as relaxation techniques, career exploration, cognitive style mapping, assertiveness training.

STUDENTS FROM OTHER NATIONS

The College welcomes and encourages qualified students from other countries to enroll and is authorized by the United States Department of Justice to issue necessary Certificates of Eligibility (Form I-20). For admissions information, these students should contact the Admissions Office at Broome Community College, P.O. Box 1017, Binghamton, New York 13902.

To be admitted to the College students from other nations must:

- Demonstrate proficiency of the English Language either by taking TOEFL examination or the Michigan Test which can be administered at the College.
- Provide an affidavit of financial support and a transcript in English (or a certified translation) of all secondary school or college work.
- Show evidence of health insurance coverage. The National Association of Foreign Student Affairs offers a health plan to meet the needs of these students, and information is available directly from insurance companies or at the Broome Community College Health Service.

No housing is provided for these students. Some local residents list available housing with the College, and students are responsible for making their own housing arrangements. It is estimated that College costs and living expenses approximate \$5,000 per year.

The College provides an advisor to assist students from other countries in their orientation to student life while at Broome Community College. Both academic and non-academic problems may be discussed with the advisor, whose office is in the Wales Building, Room 210.

PROGRAM FOR PEOPLE OVER 60

Any citizen of New York State who is 60 years of age or more may "audit" courses at Broome Community College without charge, as long as there is space available. In this connection the word "audit" means these students take the course by attending classes and being exposed to all the work given in class and assigned in the text. They do not have to do the homework or take the examinations, however, and they receive no letter grade or college credit.

The BCC Counseling and Student Development Center has a counseling assistant from the Broome County Office for Aging to work with these students. The counselor helps them in registration, course selection, orientation to the College, and determining how they can benefit from and enjoy the College's courses and facilities. In demonstrating that "It's Never Too Late to Learn," they can develop their interests and explore their potential.

WOMEN'S PROGRAMMING

Broome Community College counselors are responsive to all students and, in particular, the women who make up more than 50% of the current student body. The women range in age from 16 to 72, with many of them returning to school after varying numbers of years away from the classroom.

Women can learn individually and in small groups how to begin a program, schedule it into their lives, and receive information, support and encouragement. The many counseling programs the center offers can help them achieve their academic goals, whether it be a few courses or a degree to transfer to a 4 year college or to find employment.

ORIENTATION PROGRAM

Freshman, transfer or re-admitted students will have an opportunity to participate in various advising, counseling and orientation sessions as well as social and cultural activities prior to and during the semester of acceptance into the College. Information concerning these activities will be mailed to all students prior to the beginning of the semester.

The staff of the Student Affairs Office endorses the concept that a community college environment should facilitate the development of the whole student.



Placement

Most students who attend Broome Community College will eventually enter the labor market. Getting a job, particularly that first entry level position, requires an understanding of how to contact employers and what job hunting techniques provide the best employment success. The Placement Office not only helps you to locate positions but offers assistance in resume writing and interviewing techniques.

The Placement Office lists full-time, part-time and seasonal jobs from employers who want to hire Broome Community College students and alumni. Most of these positions are related to academic programs at the College, and they are of particular value to students wishing to gain experience in their chosen field. The New York State Employment Service "Job Bank" and employment counselor are also available on a daily basis in the Placement Office (Wales Building, Room 201).

The quality of the College's academic programs is well known by many companies both locally and nationally. During the spring semester of every year, representatives of business and industry visit the campus to interview potential graduates for employment purposes. Students wishing information regarding this recruiting program should contact the Placement Office.

Individual appointments can be made to discuss job market predictions, salary expectations, and other questions related to employment.

THE ACADEMIC AREAS

Here is a summary of the figures for each of Broome Community College's five academic areas. Percentages are based upon the number of graduates heard from and not the total number. Salary information is for entry level positions; those who had jobs before enrolling at BCC and kept them are not figured in.

BUSINESS—348 graduates, 53% employed, 10% unemployed, 35% transferred, 2% unavailable for work. Salary info—\$8,675 average, \$13,000 to \$5,538 range

HEALTH SCIENCES—172 graduates, 63% employed, 12% unemployed, 17.5% transferred, 7.5% unavailable for work. Salary info—\$10,574 average, \$13,600 to \$6,760 range

LIBERAL ARTS—177 graduates, 19% employed, 2% unemployed, 77% transferred, 2% unavailable for work. Salary info—\$8,033 average, \$11,000 to \$6,000 range

SCIENCE AND ENGINEERING TECHNOLOGY—156 graduates, 63% employed, 3% unemployed, 34% transferred. Salary info—\$12,112 average, \$15,600 to \$9,000 range

SPECIAL CAREER PROGRAMS—32 graduates, 68% employed, 7% unemployed, 18% transferred, 7% unavailable for work. Salary info—\$6,900 average, \$7,800 to \$6,000 range

CURRICULUMS

Following is a summary of each curriculum in BCC's five academic areas. Percentages based on number of graduates heard from, not total number.

LIBERAL ARTS

ASSOCIATE IN ARTS DEGREE—154 graduates, 20% employed, 2% unemployed, 76% transferred, 2% unavailable for work. Salary info—\$8,033 average, \$11,000 to \$6,000 range.

ASSOCIATE IN SCIENCE DEGREE—14 graduates, 7% employed, 93% transferred. Insufficient salary info available.

CRIMINAL JUSTICE (AA Degree)—8 graduates, 25% employed, 75% transferred. Insufficient salary info available.

INDIVIDUAL STUDIES—1 graduate, 100% transferred.

SPECIAL CAREER PROGRAMS

CHILD CARE—21 graduates, 74% employed, 10.5% unemployed, 5% transferred, 10.5% unavailable for work. Salary info—\$6,900 average, \$7,800 to \$6,000 range

CRIMINAL JUSTICE (AAS Degree)—9 graduates, 43% employed, 57% transferred. No entry level salaries.

FIRE PROTECTION TECHNOLOGY—2 graduates, 100% employed. No entry level salaries.

90% of 1979 GRADUATES FOUND JOBS OR TRANSFERRED

• **881 GRADUATES IN CLASS OF 1979** at Broome Community College, and 93% of them responded to a survey. All statistics here are based on that 93% response.

• **90% OF THE 1979 GRADUATES** either found employment or transferred to 4-year colleges, thus enabling BCC to fulfill its two major missions of preparing graduates for immediate employment or transfer to 4-year colleges.

- 51% of the graduates went to work.
- 39% transferred to 4-year colleges.
- 7% were unemployed at the time of the survey.
- 3% were unavailable for work.

• **STARTING SALARIES** of those who went to work averaged \$10,285 a year and ranged from \$15,600 down to \$5,538. About 45% of all respondents gave salary information.

• WHERE THEY WENT TO WORK—

74% of those who went to work found jobs in Broome County, with an additional 13% working elsewhere in the Southern Tier. In addition, 6% got jobs elsewhere in New York State, and another 7% went outside of the state.

• WHERE THEY TRANSFERRED TO—

- 57% of those who are continuing their higher education transferred to colleges in the State University of New York (SUNY) system.
- 26% to private colleges in New York State.
- 17% to out-of-state colleges and universities.

• LEADING EMPLOYERS, in order:

Large industries in NY State, including IBM, Eastman Kodak, GE, NY State Electric & Gas, Endicott Johnson, GAF, Singer, Corning Glass, Carrier, Xerox Hospitals, nursing homes in Broome Retail stores in Broome Small to medium industries in Broome Southern Tier industries

Small business in Broome Out of state hospitals Municipal Civil Service NY State Civil Service Restaurants and fast food franchises in Broome Banks in Broome Physicians in Broome

• COLLEGES TO WHICH BCC GRADUATES TRANSFERRED IN 1979:

SUNY Binghamton
Rochester Institute of Technology
SUNY College at Cortland
Clarkson College

SUNY Buffalo
SUNY College at Geneseo
SUNY College at Brockport
SUNY College at Oneonta

Rensselaer Polytechnic Institute
St. Bonaventure
SUNY College at Plattsburgh
SUNY Albany

BUSINESS

ACCOUNTING—78 graduates, 54% employed, 15% unemployed, 27% transferred, 4% unavailable for work. Salary info—\$8,205 average, \$13,000 to \$5,538 range.

ACCOUNTING with Banking Emphasis—3 graduates, 67% employed, 33% transferred. No salary info reported.

BUSINESS ADMINISTRATION—69 graduates, 25% employed, 4% unemployed, 71% transferred. Salary info—\$9,350 average, \$11,000 to \$6,000 range.

MARKETING GENERAL BUSINESS—29 graduates, 76% employed, 8% unemployed, 12% transferred, 4% unavailable for work. No salary info as these graduates were working before enrolling at BCC.

MARKETING MANAGEMENT—46 graduates, 50% employed, 10% unemployed, 40% transferred. Salary info—\$8,633 average, \$10,000 to \$6,500 range.

MARKETING SALES—52 graduates, 60% employed, 17% unemployed, 21% transferred, 2% unavailable for work. Salary info—\$8,905 average, \$10,000 to \$8,000 range.

OFFICE SERVICES—8 graduates, 100% employed. Salary info—\$8,840 average, \$10,000 to \$6,500 range.

SECRETARIAL—43 graduates, 78% employed, 12% unemployed, 5% transferred, 7% unavailable for work. Salary info—\$8,842 average, \$11,000 to \$5,821 range.

HEALTH SCIENCES

DENTAL HYGIENE—28 graduates, 70% employed, 11% unemployed, 15% transferred, 4% unavailable for work. Salary info—\$9,424 average, \$10,400 to \$7,000 range.

MEDICAL LABORATORY—17 graduates, 41% employed, 12% unemployed, 35% transferred, 12% unavailable for work. Insufficient salary info available.

MEDICAL OFFICE—15 graduates, 80% employed, 13% transferred, 7% unavailable for work. Salary info—\$8,156 average, \$9,000 to \$6,780 range.

MEDICAL RECORD—16 graduates, 67% employed, 13% unemployed, 13% transferred, 7% unavailable for work. Salary info—\$9,694 average, \$13,220 to \$7,000 range.

NURSING—78 graduates, 68% employed, 13% unemployed, 10% transferred, 9% unavailable for work. Salary info—\$11,655 average, \$13,600 to \$10,000 range.

RADIOLOGIC TECHNOLOGY—18 graduates, 39% employed, 17% unemployed, 39% transferred, 5% unavailable for work. Salary info—\$10,504 average.

SCIENCE AND ENGINEERING TECHNOLOGY

CHEMICAL TECHNOLOGY—19 graduates, 84% employed, 5% unemployed, 11% transferred. Salary info—\$12,870 average, \$13,800 to \$9,825 range.

CIVIL TECHNOLOGY—15 graduates, 60% employed, 13% unemployed, 27% transferred. Salary info—\$10,891 average, \$15,600 to \$9,100 range.

ELECTRICAL TECHNOLOGY—45 graduates, 84% employed, 2% unemployed, 14% transferred. Salary info—\$12,676 average, \$15,300 to \$11,000 range.

ENGINEERING SCIENCE—43 graduates, 12% employed, 88% transferred. Salary info—\$12,233 average, \$12,800 to \$11,600 range.

INDUSTRIAL TECHNOLOGY—14 graduates, 92% employed, 8% unemployed. No entry level salaries.

MECHANICAL TECHNOLOGY—20 graduates, 85% employed, 5% unemployed, 10% transferred. Salary info—\$11,062 average, \$14,200 to \$9,000 range.

Student Affairs

Student affairs at Broome Community College fall within three primary areas of responsibility—student development, student services, and student management.

Student Development responsibilities include counseling, foreign student affairs, academic advisement, testing, freshman orientation, student activities, intercollegiate athletics, drug abuse education, leadership training, career development, veterans advisement, personal development courses, transfer advisement.

Student Services cover admissions, financial aids, placement, health services.

Student Management concerns itself with student discipline, rights, responsibilities, judicial system and grievance procedures.

Health Service

The College provides a Health Service which is available to all students. Professional staff includes a part-time physician available several mornings a week for two hours and one full-time registered nurse during regularly scheduled class periods.

The Health Service provides care of injuries and minor illness, health counseling and referral service to community resources. It is a resource area for relevant student problems, and it furnishes a non-threatening environment for personal problems. All records are confidential and health data is released only with the written authorization of the student. Common procedures performed by the Health Service include blood, urine tests, throat cultures, screening for V.D., pregnancy testing, breast exams, birth control counseling.

The Health Service is located on the first floor of the Wales Building. Cots are available for students to obtain a few quiet moments in a busy schedule.

An Emergency Squad composed of students assists the Health Service to bring quick, efficient assistance in time of an emergency. Students are encouraged to become active in this important function on campus.

Living Accommodations

The College has no dormitory facility and assumes no responsibility for student housing. As a service to students, the director of the Student Activities' Office maintains an up-to-date record of housing accommodations which landlords submit as being available. This listing is neither an approval nor rating by the College, nor will the College become a third party in any arbitration between students and landlords. Housing arrangements must be made directly by students and parents with local landlords.

Room and Board

The cost of room and board for out-of-town students is dependent upon the demands of the students. The average cost varies from \$60 to \$70 per week.



STUDENT ACTIVITIES

The College recognizes the fact that student experiences outside the classroom are important in one's over-all development. For this reason the College supports an active co-curricular program as a complement to classroom studies. The variety of activities on the campus reflects the diversification of student interest and provides the opportunity for students to develop talents, leadership ability and a sense of social responsibility.

Students should check carefully for crediting arrangements for co-curricular activities. Liberal Arts, for example, permits a maximum of six such credits to be used in meeting Associate in Arts and Associate in Science degree requirements.

United Student Government

The United Student Government is the official representative organization of the student body. As such, it is consulted by the trustees, administration, faculty and staff when student input is desired.

In order to obtain the broadest possible cross-section of the campus, membership is derived from the following areas:

- A. The Freshmen and Senior class.
- B. Such educational areas as Engineering Technologies, Health Sciences, Liberal Arts, Business.
- C. The special interest groups—athletics, media, clubs, social activities.

Membership in the United Student Government is by campus-wide election or by appointment, as appropriate.

Some functions of the Student Government are:

1. Coordination, distribution, and supervision of funds for student activities.
2. Recommendation of policy to the College Administration via the College Senate.
3. Having representatives serve on the Faculty-Student Association.

The United Student Government is a member of the Community College Student Association and coordinates the activities of this college with other colleges and universities statewide.

Program Board

The Program Board is one of the most active and hard working organizations on campus. The Board is responsible for sponsoring all social events as well as college hour and convocation programs. These events, including mixers, movies, coffee houses, concerts, spring picnic, semi-formals and programs featuring famous artists and speakers, are funded with the student activity fee. The Program Board also affords students an opportunity to purchase tickets at reduced prices to a variety of programs at the Broome County Veterans Memorial Arena and the Forum and other off-campus locations.

Educational Opportunity Program (EOP)

The Educational Opportunity Program is designed for students who are economically and educationally disadvantaged. It provides economic aid and remedial and developmental assistance, with the amount of financial aid based on need. Students who do not require financial assistance under this program may benefit from the educational services offered by EOP. To be funded by EOP, students must provide appropriate income information, and all students must be New York State residents as this is a state program. The EOP Office at the College is in Room 102 of the Electrical Building—phone 772-5109.

Special Services Program

The Special Services Program at Broome Community College is a federally funded program working jointly with State University of New York (SUNY) at Binghamton.

The program provides counseling services, tutorial help and information concerning other student needs. Tutoring sessions are held during the day at Broome Community College and also evenings and weekends at designated off-campus spots. The Special Services counselor is located in the Electrical Building on campus and can be contacted at 772-5109.

The Union

The small pre-fab building on campus is known as The Union. It houses varied facilities for students to enjoy during their leisure hours. A Union Board governs the rules and regulations under which billiard and ping-pong tables, "foosball", air hockey and pin ball machines are made available to the students. For those who wish to relax, there is a lounge with fireplace, player piano, television and vending machines.

Also located in The Union are the offices of the yearbook, campus newspaper, Program Board, United Student Government, the student trustee, Clubs Council, Judicial Review Board and Student Activities.



Student Center

The busiest and most versatile building on the Broome Community College campus is the Student Center. It houses the gymnasium, the College Cafeteria, Book Store, and the Little Theatre, and many of the social events are held here. This building is used by day and evening students of all curriculums.

Student Publications

The Fulcrum is the student newspaper and The Citadel the yearbook. Positions on both publications are open to all students.

The Fulcrum covers college issues both editorially and graphically. Published twice monthly, it is the principal voice of the student community. It is managed and edited by the students themselves.

The Citadel staff is involved in the development and editing of the College yearbook which reflects the unique features of the current school year, and offers a pictorial presentation of the students, faculty and staff.

Music

College Choir is sponsored jointly by the Liberal Arts Division and United Student Government. Choristers have gained an excellent reputation and are exposed to a broad range of choral literature reflecting the varied demands for community concerts. The chorus traditionally produces its own Christmas program for local television and presents an annual Spring Concert, as well as performing for local church and civic organizations. The College Choir, moreover, makes an annual concert tour to such places as Washington, D.C., or New York City. Rehearsals are held twice weekly and all students as well as faculty and staff are welcome to sing in the ensemble.

The Instrumental Music Association offers students who have previously played instruments the chance to continue their involvement in small ensembles (brass, woodwind, string and recorder) and the College Stage Band. A limited program of private coaching is also available.

The Broome Community College Theatre Company

Complementing the studio and academic course work in theatre is the Broome Community College Theatre Company. All students are invited to participate, whether or not enrolled in formal course work.

The Theatre Company enjoys a fine artistic reputation, presenting a broad range of theatrical styles, and provides its actor/technicians with varied opportunities for ensemble as well as individual training. Whether performing in the intimate setting of the college's Little Theatre, or on the road in Europe in an international festival, the BCC Theatre Company provides a challenging and exciting experience for students with an interest in the theatre.

NOTE: Students may receive transferable credit for active participation in College Choir, the Instrumental Music Association and the College Theatre Company. The conditions for this credit are available from one's advisor.

Other Clubs

In addition to the co-curricular activities already listed, other organizations are active on campus. These include:

Archery Club	Inmate Education
Art Club	Newman Club
Aviation Club	Outing Club
Bio Club	Over 21 Club
Camera Club	Parachute Club
Campus Bible Fellowship	Scuba Club
Circle K	Ski Club
Emergency Squad	Third World
Environmental Action Club	

These are open to all full-time students and to part-timers who pay the student activity fee. Details are available in the Student Handbook and from the Director of Student Activities.

Professional Society Affiliates

Since exposure to organizations in their fields of study is considered of benefit to students, many curriculums have their own affiliates of national professional societies. Among these are:

Society of Manufacturing Engineers (SME) for Mechanical Engineering Technology students.

Dental Hygiene Association, an affiliate of the American Dental Hygiene Association.

Broome CC Chapter **Future Secretaries Association**, affiliated with the National Secretaries Association (International) Binghamton Chapter.

Institute of Electrical and Electronics Engineers (IEEE) for Electrical Technology students.

In addition, some meetings of local professional societies are attended by students, as the **American Chemical Society** invites Chemical Technology students to its meetings. Some professional societies hold meetings on campus, too, and students are always welcome to attend. Thus students have the opportunity to become acquainted with professional people in their fields of study and to attend lectures and see films and demonstrations of new developments.

Curriculum Organizations

In addition to the student organizations listed above that are affiliated with professional societies, the College has a number of associations that are identified with specific curriculums. Among these are the Business Club, the Civil Technology Association, the Medical Laboratory Technology Society, the Student Nurses Association, the Lively Arts from the Liberal Arts curriculum, and the Student Organization of Radiologic Technologists.

Honor Societies

Phi Theta Kappa

In 1962, the Mu Eta Chapter of Phi Theta Kappa was established at the College. Phi Theta Kappa is a national honor society at junior colleges, similar in purpose to Phi Beta Kappa at the four-year colleges and universities. Mu Eta Chapter is open to freshmen and seniors at Broome CC who have achieved outstanding academic grades, been especially active in co-curricular participation, demonstrated outstanding qualities of leadership and responsibility, and made noteworthy contributions to the College.

Sigma Phi Alpha

The national dental hygiene honor society, Sigma Phi Alpha, has a chapter at Broome CC, the Upsilon Chapter. Senior Dental Hygiene students who rank highest in scholarship and who exhibit potential qualities for future growth and attainment are selected for membership.

Tau Alpha Pi

The national honor society for students in engineering technology programs, Tau Alpha Pi has established a chapter on the Broome Community College campus. It is the Beta Theta Chapter. This society recognizes outstanding academic achievement in BCC engineering technology curriculums in Electrical, Civil, Chemical and Mechanical Technology.

Men's Sports

Broome Community College fields men's teams in eight varsity sports and competes on a club basis in several other sports.

BCC athletic teams have earned an excellent reputation in two-year college competition. Included in the basketball team's more than 700 victories are 10 regional titles.

The tennis team has also been a frequent regional winner, and the baseball team has continued to be a regional power since capturing its third Region III title in 1974. The golf team had a stretch of 39 wins in 40 dual matches, and the cross country and wrestling teams have shown marked improvement and have sent competitors to recent national tournaments. The fortunes of the soccer team appear to be on the rise too.

Women's Sports

Broome Community College fields women's teams in five varsity sports—tennis, volleyball, basketball, cross-country and softball—and they have achieved some fine sports success in recent years. The tennis team has captured three regional titles and participated in national tournaments, and the volleyball team was invited to the first-ever National Junior College Volleyball Tournament. The basketball team finished third in the regional tournament last season.

Intramurals

Physical activity is a vital part of an individual's life, regardless of physical capability. With this in mind, the Physical Education Department coordinates an intramural program for all students enrolled at the College. Students are invited to participate in team sports such as soccer, gym hockey, basketball, volleyball and softball. For those interested in individual competition or "play for fun", sports such as tennis, golf, badminton, horseshoes and bowling are also offered.



About Broome Community College

Broome Community College is a comprehensive community college. It has programs designed to prepare graduates both for immediate employment and for transfer to four-year colleges and universities at the junior, or third-year level.

In addition to its daytime enrollment, which numbered 2,900 last year, the college has a continuing education program which had about 2,500 part-time evening students in the fall of 1979 and about 1,000 taking courses during the Summer Session.

The College is co-educational, publicly-supported, and has historically attracted about two-thirds of its student body from Broome County and one-third from outside the county. The ratio has recently been closer to 80% and 20%.

The day student body can be classified into six parts, based on study objectives—the business programs, engineering and engineering technology curriculums, health science courses, liberal arts programs, computer studies, and special career offerings.

The College is sponsored by Broome County, supervised by the State University of New York, and accredited by both professional and educational organizations (see inside front cover).

The Campus

The College campus is located three miles north of Binghamton on Upper Front Street, which is Route 11 and Route 12 at this point running alongside of Interstate 81. Nine of the 12 buildings form two contiguous quadrangles to make a compact campus layout.

Most of the buildings are two stories high, of modern functional design, and made of brick with colored panelwall facing. They lie in a suburban setting in the virtual center of the College's 120 acres of land.

In addition to classrooms and laboratories, the campus has its own cafeteria, gymnasium and athletic fields, and a Little Theatre. These facilities add up to make the campus a multi-million dollar investment in the youth of Broome and surrounding counties.

Campus Carillon

The College has a Maas-Rowe symphonic carillon, which tolls the hours with the Westminster chimes and occasionally plays musical selections through its automatic music roll attachment. The carillon was a gift to the College, donated by former trustee Dr. Leopold Eckler and the College Foundation.

The Community

The community is an industrial and agricultural area in New York State's Southern Tier. It is in the approximate center of the state, measuring from east to west, and its southern extremity touches the Pennsylvania state line.

Binghamton is the principal city in Broome County, but it is only a part of the community known as the Triple Cities. Endicott and Johnson City, along with Vestal and other suburbs, help to make the community much larger in population and geography than the city of Binghamton.

Binghamton has a population of 64,123, yet the Triple Cities area embraces 155,522 people. The population of Broome County is 221,815. Diversified industry in the community includes such firms as IBM, General Electric, Singer Co. (formerly Link), GAF, New York State Electric & Gas Corp., and Endicott Johnson.

The College has become an integral part of the community since it was started in 1946. Many of the campus facilities are offered at nominal cost for use by responsible organizations, and most of the College's curriculums are designed to help fill the economic needs of the county.

History

The College graduated its first class in 1949. These students had entered what was then known as the New York State Institute of Applied Arts and Sciences at Binghamton in the fall of 1947. The original institute was one of five founded in the state in 1946, following the pattern of six agricultural and technical institutes which New York had established earlier in the century. The first programs offered were all occupational in nature and included Chemical, Electrical and Mechanical Technology, as well as Medical Office and Technical Office Assistant courses.

In 1953 New York relinquished operating control of the school to a new sponsor, the County of Broome, under provisions of the State Community College Law, and the name was changed to Broome County Technical Institute. In 1956 the name was again changed, to Broome Technical Community College, to reflect the increasingly comprehensive nature of the educational offerings. In 1971 the name became Broome Community College as the scope of the curriculums continued to expand.

The Civil Technology program was added to the five original curriculums in 1957, Dental Hygiene was introduced in 1956, and the Business programs were expanded to include offerings in Accounting, Marketing, Engineering Secretarial in the 1950's. Executive Secretarial was added in the early 1960's.

A big change in the College's programs came about in the 1950's as a result of a new emphasis on university-parallel or transfer programs to go along with the college's occupational offerings. Engineering Science, the first two years of an engineering program, was introduced in 1958, Liberal Arts and Sciences in 1962 and Business Administration in 1963.

In the late 60's interest began to develop in the health science field. As a result, the College introduced a degree-granting program in X-Ray Technology in 1965, added Medical Laboratory Technology in 1966, Nursing a year later, and Medical Record Technology in 1969. The College was responding to the changing needs of the area and adjusting its offerings to fulfill the mission of catering to the post-high school educational needs of the community.

Criminal Justice and Child Care have been added since, and degree programs in Individual Studies and in Industrial Safety and Occupational Hygiene were recently introduced, along with Office Services Assistant. Additional new offerings are being introduced in Computer Studies and in Tool and Die Making.

For its first five years, the school was housed in a refurbished State Guard Armory in downtown Binghamton. This building was gutted by fire in September 1951, and for the next five years Kalurah Temple and two other buildings in the city provided temporary quarters. In 1957 the College moved to its present campus on the north side of Binghamton. The first addition to the original campus came with the construction of Titchener Hall, which was dedicated in 1963. The Library Building was completed five years later, and the Business Building opened in 1972.

BOOK STORE

The College Book Store, or Campus Store as it is sometimes referred to, is located in the Student Center and actually has two areas of operation—the Textbook Department and The Campus Shop.

In the Textbook Department students may purchase their required books. To avoid standing in long lines the first week of classes, students are urged to purchase their books during the advance sale period, which immediately precedes the start of classes. It is advisable to purchase all required textbooks early in the semester. In addition to the obvious reason of using them for studying, all unsold books must be returned to the publisher shortly after the semester begins.

The Campus Shop offers a variety of items. In addition to such classroom supplies as notebooks, paper, pens and binders, there are art and drafting materials, imprinted gift items and sportswear, and an extensive selection of paperbacks.

The store manager welcomes students to speak to him about any special problems, suggestions or requests.

ALUMNI

The Broome Community College Alumni Association provides a link between the College and its Alumni, and its activities include the awarding of a number of scholarships each year and the active and monetary support of various college programs.

Any graduate may become a member by paying the modest lifetime dues of \$20. There are no annual dues. Membership entitles alumni to discounts for some on-campus functions; group term/life insurance at special rates; voting eligibility for the Board of Directors including rights to stand for election to a seat on the Board. Alumni also receive the College's quarterly newsletter, BCC TODAY, and the Alumni Association conducts an annual Dinner-Dance. Alumni are encouraged to join and participate.

FACULTY-STUDENT ASSOCIATION

The Faculty-Student Association of Broome Community College, Inc., is an educational corporation designed to provide to the College, and particularly to the students and faculty, services that are not included in the regular College budget.

It provides the corporate organization through which the student fees are expended under a budget prepared by the United Student Government. It also operates the College Book Store.

Through the modest earnings of the Book Store the income from student fees is augmented to support new or special activities.

The association is governed by a board of directors elected by members who hold certain offices on campus.

The operating philosophy is to make the educational program outside of the classroom a well-rounded supplement to the academic experience of the student.

Programs of Study By Curriculum

The academic programs, whose display of courses appears on pages 29 to 55, are designed primarily for full-time students of the College. It is possible, however, for one to study for an associate degree in any of these curriculums on a part-time basis. To do this, one should contact the appropriate department chairperson. The College's programs that are intended mainly for part-time students appear on pages 56 to 67.



BUSINESS

DEPARTMENT CHAIRMAN, Thomas Rossi
Business Building, Room 108
Telephone 772-5133

ACADEMIC ADVISING, William Matechak
Business Building, Room 106
Telephone 772-5171

The Business Department offers courses of study in three areas—Accounting, Business Administration and Marketing. In addition, emphases are offered within these areas in banking, management, sales, insurance and real estate. These programs were planned with the assistance of advisory committees, made up of businessmen and women currently working in the fields.

To assist the incoming student in selecting the proper option, all have a common first semester. Thus, the final decision of programs can be delayed until registration for the second semester.

Cooperative work experience is available to many business students. This course offers the student both first-hand practical experience and college credit.

A majority of these programs is

designed to prepare the graduate for immediate employment. Others, such as Business Administration, are designed to facilitate transfer to a four-year college or university. However, transfer of some courses is possible from each of the programs.

As every college has its own transfer policy, the number of credits accepted will vary. So as soon as students identify the school to which they wish to transfer, they should contact that institution to determine the courses which are acceptable. Schools with the American Assembly of Collegiate School of Business Accreditation often accept BUS 100 and 101 Accounting I and II, BUS 118 and BUS 120 Business Law I and II, BUS 115 Business Statistics and BUS 110 Introduction to Business.

Marketing students being evaluated by their classmates in an interviewing situation.



BUSINESS ADMINISTRATION

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

BUS 101	Accounting II	4	0	4
BUS 120	Business Law II	3	0	3
CST 110	Introduction to Data Processing	3	0	3
*MAT 139	Algebra	3-4	0	3-4
or				
BUS 115	Business Statistics	16-17	0	16-17

*If a student has passed Mathematics 11 or intermediate algebra in high school, he/she takes BUS 115 Business Statistics.

SECOND YEAR Fall Semester

Elect 1 of the following 4 courses:

BUS 200	Intermediate Accounting I	(4)	0	(4)
BUS 249	Personnel Management	(3)	0	(3)
CST	Computer Programming Elective	(2)	(2)	(3)
	Liberal Arts Elective	(3)	0	(3)
ECO 110	Introduction to Micro-Economics	3	0	3
MAT 121	Finite Mathematics	3	0	3
	Lab Science Elective	3	3	4
	Liberal Arts Elective	3	0	3
PED	Physical Education	2	0	1
		16-18	3-5	17-18

Spring Semester

Elect 1 of the following 4 courses:

BUS 201	Intermediate Accounting II	(4)	0	(4)
BUS 245	Management: A Behavioral Approach	(3)	0	(3)
	Liberal Arts Elective	(3)	0	(3)
	Computer Programming Elective	(2)	(2)	(3)
ECO 111	Introduction to Macro-Economics	3	0	3
MAT 122	Introduction to Calculus	3	0	3
	Lab Science Elective	3	3	4
	Liberal Arts Elective	3	0	3
		14-16	3-5	16-17

ACCOUNTING

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I		4	0	4
BUS 112	Business Mathematics		2	0	2
BUS 118	Business Law I		3	0	3
BUS 141	Marketing		3	0	3
ENG 110	Written Expression I		3	0	3
			15	0	15

Spring Semester

BUS 101	Accounting II		4	0	4
CST 110	Introduction to Data Processing		3	0	3
ENG 120	Written Expression II		3	0	3
*MAT 117	Elementary Finite Mathematics with Algebra		4	0	4
	or Liberal Arts Elective		(3)	(0)	(3)
SPK 100	Effective Speaking		2	0	2
			15-16	0	15-16

SECOND YEAR Fall Semester

BUS 200	Intermediate Accounting I		4	0	4
BUS 205	Cost Accounting I		4	0	4
PHS 111	Physical Science for Today		2	2	3
	Social Science Elective		3	0	3
	Elect 1 of the following				
BUS 249	Personnel Management		(3)	(0)	(3)
BUS 297	Co-operative Work Experience				(1-3)
CST	A programming language course		(2)	(2)	(3)
			15-16	2-4	15-17

Spring Semester

BUS 201	Intermediate Accounting II		4	0	4
BUS 206	Cost Accounting II		4	0	4
	Elect 2 out of 3				
BUS 220	Financial Information Systems		(2)	(2)	(3)
BUS 295	Accounting Seminar		(4)	(0)	(4)
CST	A programming language course		(2)	(2)	(3)
	Social Science Elective		3	0	3
			15-17	2-4	17-18

*If a student has passed Mathematics 11 or intermediate algebra in high school he/she takes a Liberal Arts elective.

ACCOUNTING—BANKING EMPHASIS

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I		4	0	4
BUS 112	Business Mathematics		2	0	2
BUS 118	Business Law I		3	0	3
BUS 141	Marketing		3	0	3
ENG 110	Written Expression I		3	0	3
			15	0	15

Spring Semester

ECO 111	Introduction to Macro-Economics		3	0	3
BUS 101	Accounting II		4	0	4
BUS 120	Business Law II		3	0	3
ENG 120	Written Expression II		3	0	3
PSY 110	Psychology		3	0	3
			16	0	16

SECOND YEAR Fall Semester

BUS 245	Management: A Behavioral Approach		3	0	3
CST 110	Introduction to Data Processing		3	0	3
SPK 102	Effective Speaking		3	0	3
PHS 111	Physical Science for Today		2	2	3
†ECO 253	Money and Banking		3	0	3
			14	2	15

Spring Semester

BUS 249	Personnel Management		3	0	3
BUS 224	Business Finance		3	0	3
BUS 152	Selling Fundamentals		3	0	3
	Social Science Elective		3	0	3
* Business Elective			3-4	0	3-4
			15-16	0	15-16

*Suggested Business Electives include such American Institute of Banking (AIB) courses as Analyzing Financial Statements, Installment Credit, Principles of Bank Operations, Supervision and Personnel Administration, as well as BUS 297 Co-operative Work Experience.

†If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.

MANAGEMENT EMPHASIS

**FIRST YEAR
Fall Semester**

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I	.....	4	0	4
BUS 112	Business Mathematics	.....	2	0	2
BUS 118	Business Law I	.....	3	0	3
BUS 141	Marketing	.....	3	0	3
ENG 110	Written Expression I	.....	3	0	3
			15	0	15

Spring Semester

BUS 101	Accounting II	.....	4	0	4
BUS 120	Business Law II	.....	3	0	3
ENG 120	Written Expression II	.....	3	0	3
*MAT 117	Elementary Finite Mathematics with Algebra	.....	4	0	4
	or				
	Liberal Arts Elective	.....	(3)	0	(3)
ECO 110	Micro Economics	.....	3	0	3
			16-17	0	16-17

**SECOND YEAR
Fall Semester**

BUS 115	Business Statistics	.....	3	0	3
BUS 152	Selling Fundamentals	.....	3	0	3
BUS 245	Management: A Behavioral Approach	.....	3	0	3
CST 110	Introduction to Data Processing	.....	3	0	3
SPK 102	Effective Speaking	.....	3	0	3
	Social Science Elective	.....	3	0	3
			18	0	18

Spring Semester

BUS 224	Business Finance	.....	3	0	3
BUS 270	Decision Making	.....	3	0	3
BUS 249	Personnel Management	.....	3	0	3
PHS 111	Physical Science for Today	.....	2	2	3
	Elect 1 of the following:				
CST 118	Computer Programming— COBOL	.....	(2)	(2)	(3)
CST 120	Computer Programming— FORTRAN	.....	(2)	(2)	(3)
	Business Elective	.....	(3)	(0)	(3)
			13-14	2-4	15

*If a student has passed Mathematics 11 or Intermediate Algebra in high school, he/she takes a Liberal Arts elective.

SALES EMPHASIS

**FIRST YEAR
Fall Semester**

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I	.....	4	0	4
BUS 112	Business Mathematics	.....	2	0	2
BUS 118	Business Law I	.....	3	0	3
BUS 141	Marketing	.....	3	0	3
ENG 110	Written Expression I	.....	3	0	3
			15	0	15

Spring Semester

BUS 120	Business Law II	.....	3	0	3
BUS 129	Consumer Behavior	.....	3	0	3
BUS 152	Selling Fundamentals	.....	3	0	3
BUS 249	Personnel Management	.....	3	0	3
ENG 120	Written Expression II	.....	3	0	3
			15	0	15

**SECOND YEAR
Fall Semester**

BUS 229	Advertising	.....	4	0	4
CST 110	Introduction to Data Processing	.....	3	0	3
SPK 102	Effective Speaking	.....	3	0	3
PHS 111	Physical Science for Today	.....	2	2	3
BUS	Business Elective	.....	3	0	3
ECO 110	Micro Economics	.....	3	0	3
	or				
SOC 110	Introduction to Sociology	.....	3	0	3
			18	2	19

Spring Semester

BUS 157	Business Report Writing	.....	3	0	3
BUS 242	Marketing Seminar	.....	3	0	3
BUS 245	Management: A Behavioral Approach	.....	3	0	3
BUS 264	Retailing	.....	3	0	3
	Liberal Arts Elective	.....	3	0	3
PSY 110	Psychology	.....	3	0	3
	or				
PSY 100	Psychology of Personal Adjustment	.....	3	0	3
			18	0	18

MARKETING

INSURANCE EMPHASIS

FIRST YEAR Fall Semester

			Credits	
			Hours per Week	per Semester
			Class	Lab
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
			15	15

Spring Semester

ECO 111	Introduction to Macro-Economics	3	0	3
BUS 120	Business Law II	3	0	3
BUS 165	Principles of Insurance	3	0	3
ENG 120	Written Expression II	3	0	3
PSY 110	Psychology	3	0	3
			15	15

SECOND YEAR Fall Semester

†BUS 166	Property & Casualty Insurance	3	0	3
BUS 245	Management: A Behavioral Approach	3	0	3
CST 110	Introduction to Data Processing	3	0	3
SPK 102	Effective Speaking	3	0	3
PHS 111	Physical Science for Today	2	2	3
			14	15

Spring Semester

BUS 152	Selling Fundamentals	3	0	3
BUS 224	Business Finance	3	0	3
BUS 249	Personnel Management	3	0	3
	Social Science Elective	3	0	3
	*Business Elective	3-4	0	3-4
			15-16	15-16

*Suggested Business Electives include BUS 262 Small Business Management, BUS 229 Advertising, BUS 115 Business Statistics, BUS 247 Sales Management, BUS 170 Insurance for Agents and Brokers, BUS 297 Co-operative Work Experience.

†If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.

REAL ESTATE EMPHASIS

FIRST YEAR Fall Semester

			Credits	
			Hours per Week	per Semester
			Class	Lab
BUS 112	Business Mathematics	2	0	2
BUS 100	Accounting I	4	0	4
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
			15	15

Spring Semester

ECO 111	Macro-Economics	3	0	3
†BUS 163	Real Estate for Salespersons	4	0	4
BUS 120	Business Law II	3	0	3
ENG 120	Written Expression II	3	0	3
PSY 110	Psychology	3	0	3
			16	16

SECOND YEAR Fall Semester

BUS 245	Management: A Behavioral Approach	3	0	3
CST 110	Introduction to Data Processing	3	0	3
SPK 102	Effective Speaking	3	0	3
PHS 111	Physical Science for Today	2	2	3
†BUS 164	Real Estate for Brokers	4	0	4
			15	16

Spring Semester

BUS 249	Personnel Management	3	0	3
BUS 224	Business Finance	3	0	3
BUS 152	Selling Fundamentals	3	0	3
	Social Science Elective	3	0	3
	*Business Elective	3-4	0	3-4
			15-16	15-16

*Suggested Business Electives include BUS 262 Small Business Management, BUS 229 Advertising, BUS 247 Sales Management, BUS 125 Real Estate Law, BUS 297 Co-operative Work Experience.

†If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.

CHEMICAL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, James Spalik
Science Building, Room 108
Telephone 772-5009

The Chemical Engineering Technology curriculum is designed to meet the increasing demand for chemical technicians. Graduates of the Chemical Engineering Technology program have the education and training which qualifies them for immediate gainful employment and/or further study for advanced degrees. This background makes the Chemical Engineering Technology graduates highly sought after by employers and concurrently affords them the flexibility to advance academically.

Chemical technicians of both sexes have filled a vital manpower need in companies and organizations where background in various areas of chemistry is necessary or desirable. The constant development of new products, for example, creates a demand for chemical technicians.

Employers of chemical technicians include IBM, GAF, Eastman Kodak,

Allied Chemical, DuPont, Norwich Pharmacal, General Electric, American Cyanamid, Union Carbide, Bristol Laboratories, Warner-Lambert and many other industrial firms as well as government agencies, hospitals and educational institutions.

Initial positions are usually in a research, development, process, quality control or analytical laboratory or in a pilot plant. In these positions a chemical technician may work for a senior staff member or be a member of a group working in a particular area. Experienced chemical technicians have become supervisors, group leaders, technical salesmen and research and development technicians.

This curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET). This is the new name for the Engineers Council for Professional Development (ECPD).

FIRST YEAR Fall Semester

		Hours per Class	Week Lab	Credits per Semester
ENG 110	Written Expression I	3	0	3
CHM 161	Chemistry	3	3	4
MAT 141	College Algebra and Trigonometry	4	0	4
PHY 141	Physics	3	2	4
		13	5	15

Spring Semester

ENG 150	Technical Writing	3	0	3
CHM 162	Chemistry	3	3	4
MAT 142	Applied Calculus I	4	0	4
PHY 142	Physics	3	2	4
CST 122	Scientific Computer Programming—FORTRAN	2	2	3
		15	7	18

SECOND YEAR Fall Semester

CHM 261	Organic Chemistry	3	6	5
CHM 265	Analytical Chemistry	3	6	5
CHM 271	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

Spring Semester

CHM 262	Organic Chemistry	3	6	5
CHM 266	Analytical Chemistry	3	6	5
CHM 272	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

GRADUATION REQUIREMENT: 69 CREDITS

Chemical Engineering Technology students completing an analysis using the department's computerized infrared spectrophotometer. In the College's Instrumental Analysis Laboratory.





CHILD CARE

DEPARTMENT CHAIRMAN, Francis J. Short
Department of Special Career Programs
Mechanical Building, Room 219
Telephone 772-5087

This Child Care program leads to an Associate in Applied Science (AAS) degree and is designed to prepare graduates for immediate employment or, in the case of those students who are already working in the Child Care field when they enroll, to improve their capabilities and increase their opportunities for advancement. It is open to students on both a full-time and a part-time basis.

The starting salary for graduates of the AAS degree program in Child Care who go to work immediately after graduation is between \$6,800 and \$10,000 a year for those who become directors and \$5,000 to \$7,000 for those who become teachers or teacher aids. These figures are for 10-month positions.

PLEASE NOTE

The curriculum display shown here is for full-time students, and they should be aware that careful advisement is necessary to enable them to be properly scheduled in this program to complete the work in two years. Anyone interested in enrolling as a full-time student should, therefore, consult with the department chairman first. The curriculum display for part-time students appears on page 44.

Students planning to transfer to a 4-year college program in Child Care or related fields are advised to follow the sequence of courses in the Liberal Arts Division's Associate in Arts (AA) degree curriculum. See page 43.

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
ENG	110	Written Expression	3	0	3
PSY	110	General Psychology	3	0	3
SOC	110	Introduction to Sociology	3	0	3
*CDC	110	Introduction to Education of Young Children	2	2	3
†CDC		Child Care Elective	2-3	0-2	3
			13-14	0-4	15

Spring Semester

ENG		English or Literature Elective	3	0	3
PSY	211	Child Development	3	0	3
*CDC	120	Curriculum Development	2	2	3
		Humanities Elective	3	0	3
‡Related Elective			3	0	3
			14	2	15

SECOND YEAR Fall Semester

*CDC	170	Practicum I			3
†CDC		Child Care Elective	2-3	0-2	3
		Math/Science Elective	3-4	0-3	3-4
†CDC		Child Care Elective	2-3	0-2	3
		‡Related Elective	3	0	3
			10-13	0-7	15-16

Spring Semester

*CDC	200	Social Psychology of Education	2	2	3
*CDC	290	Practicum II			6
†CDC		Child Care Elective	2-3	2-0	3
		Math/Science Elective	3-4	0-3	3-4
			7-9	0-7	15-16

*CDC COURSES ARE GIVEN MAINLY IN THE EVENING.

†CDC electives may be taken from among CDC 115 Music for Young Children, CDC 140 Art for Young Children, CDC 150 Motor Development, CDC 160 Nutrition, CDC 210 Special Problems in Children, CDC 220 Trends in Education of Young Children, CDC 230 Working with Parents in Nursery Programs, CDC 250 Language in Early Childhood, LIT 263 Children's Literature.

‡Related electives may be taken from among PSY 212 Adolescent Development, PSY 214 Abnormal Psychology, PSY 217 Counseling and Interviewing, PSY 227 Behavior Modification, SOC 210 Crime and Deviant Behavior, SOC 230 Marriage, Family and Divorce, SAC 101 The Individual in a Changing Environment, SAC 295 Seminar in Human Potential or from other disciplines.

DEPARTMENT CHAIRMAN, Stephen G. Steele
Mechanical Building, Room 117
Telephone 772-5010

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CIV	111	Surveying I	2	6	4
CIV	115	Engineering Drawing I	1	3	2
EGR	110	Introduction to Technologies	1	0	½
ENG	110	Written Expression I	3	0	3
MAT	141	College Algebra and Trigonometry	4	0	4
		Social Science Elective	3	0	3
			14	9	16½

Spring Semester

CIV	112	Surveying II	1	3	2
CIV	117	Architectural Drafting I	1	3	2
CIV	124	Mechanics	3	0	3
MAT	142	Applied Calculus I	4	0	4
PHY	141	Physics	3	2	4
ENG	150	Technical Writing	3	0	3
			15	8	18

SECOND YEAR Fall Semester

CIV	215	Strength of Materials	4	0	4
CIV	217	Materials Testing	2	3	3
PHY	142	Physics	3	2	4
Technical Electives (Choose 2)					
CIV	238	Architectural Design and Building Materials	2	3	3
CIV	235	Hydraulics	3	3	4
CST	122	Scientific Computer Programming—FORTRAN	2	2	3
MAT		Mathematics Elective	3	0	3
			13-15	7-11	17-18

Spring Semester

Social Science Elective					
Technical Electives					
(Choose at least 13 credits)					
CIV	212	Route Surveying and Photogrammetry	3	3	4
CIV	224	Reinforced Concrete Design	2	3	3
CIV	226	Structural Steel Design	2	3	3
CIV	236	Construction Management	3	0	3
CIV	231	Estimating and Construction Planning	2	3	3
CIV	240	Soil Mechanics	2	3	3
CIV	244	Environmental Sanitation	3	0	3
MAT		Mathematics Elective	3	0	3
			13-15	6-15	16-18

GRADUATION REQUIREMENT: 67½ CREDITS

A survey party of Civil Engineering Technology students measuring angles on the campus with a theodolite.

The Civil Engineering Technology curriculum at Broome Community College is designed to prepare graduates for technical positions in the civil engineering and construction industries. The primary objective of the program is to train engineering technicians who will work for civil engineers, heavy and building contractors, surveyors and architects. The construction industry, considering all related goods and services such as manufacturing and transportation, is the largest industry in the country.

Starting positions may be in drafting design, estimating, testing of materials, specification writing, construction inspection, surveying, field engineering, sales and insurance adjusting. Excellent opportunities exist for advancement and promotion. Starting salaries in June of 1979 ranged from \$9,300 to \$15,600.

The Civil Engineering Technology Department offers two degrees: 1—the Associate in Applied Science degree in Civil Engineering Technology is offered during the day. This degree is accredited by the Accreditation Board for Engineering and Technology (ABET), formerly Engineers Council for Professional

Development (ECPD). 2—The Associate in Applied Science degree in Industrial Technology, Civil Technology major, is offered in the evening.

Graduates of the program are eligible to become certified as Associate Engineering Technicians by the Institute for the Certification of Engineering Technicians.

It is expected that, nationwide, many new and exciting jobs will be created. The energy crisis has brought a great increase in activity to make this country self-sufficient. Billions of dollars will be spent on electric power generation and environmental pollution control.

In order for students to complete the curriculum in two years, the proper preparation is necessary. The minimum prerequisites are high school intermediate algebra, trigonometry and regents physics or their equivalents. For those wishing to enter the program without these prerequisites, Broome Community College offers the necessary preparatory courses. It would then usually take an additional semester or two to graduate. A special schedule will be worked out with the department chairman.

The Computer Studies Department at Broome Community College offers four degree programs in the computer field—Computer Science, Data Processing, Data Processing—Technical, Industrial Technology with Computer Emphasis. The Computer Science program leads to the Associate in Science degree, while graduates of the other three receive the Associate in Applied Science degree.

THE COMPUTER SCIENCE PROGRAM prepares students for interesting and challenging careers in systems and applications programming, mathematics, systems analysis and operations research by providing the first two years of a four-year degree sequence. During the first semester the student is assigned an advisor and encouraged to investigate transfer colleges with a future career in mind, as career goals influence elective choices.

Programmers, for example, would study many different languages plus data structures and systems. Systems programmers would take, in addition, computer logic and microprocessors. A mathematics, systems analysis or operations research major would eliminate some language courses and substitute higher level math courses.

THE DATA PROCESSING PROGRAM is business oriented. It prepares students for entry level employment as business applications programmers and apprentice financial systems programmer/analysts. Courses studied include accounting and mathematics to learn problem analysis; computer language courses to design and code problem solutions; English, speech, report writing and social science courses to communicate the solutions to others.

THE DATA PROCESSING-TECHNICAL PROGRAM is oriented toward scientific programming with some emphasis on hardware design and function. It prepares students for entry level employment as scientific applications programmers and in the emerging field of micro-computer hardware/software design. Courses studied include mathematics and logic to learn problem analysis; high level and assembly languages to design and code solutions; English, speech and technical writing courses to communicate solutions to others.

INDUSTRIAL TECHNOLOGY WITH COMPUTER EMPHASIS is intended primarily for part-time students attending classes in the evening. Information on this program appears on page 61.

In every Computer Studies program the student must learn to write well documented, easy to read, structured programs. The required structured programming language Pascal leads toward that goal.

The following excerpt from a publication of the Better Business Bureau ("Facts on Computer Careers," 1977) should be helpful to those considering careers in the field:

"For all its dynamic growth, the computer field is still in its infancy. Opportunities for advancement are limited primarily by the individual's skills, educational background, ability to communicate, and personal drive. However, genuine aptitude and desire are critical.

"In addition to adequate training, most jobs in the computer field require certain personal traits which are of prime importance. Foremost is the ability to think logically. Also important are the ability to systematically organize, analyze and handle data and information; close attention to detail and accuracy; and the ability to use imagination in devising new solutions to existing problems."

DEPARTMENT CHAIRPERSON, Mary Diegert
Titchener Hall, Room 221-F
Telephone 772-5022

COMPUTER SCIENCE (Associate in Science Degree)

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CST	111	Introduction to Computer Studies	3	0	3
CST	115	Problem Solving with Pascal	2	2	3
ENG	110	Written Expression I	3	0	3
MAT	163	Calculus with Analytic Geometry I	4	0	4
		Social Science Elective	3	0	3
PED		Physical Education Elective	0	2	1
			15	4	17

Spring Semester

LIT		Literature Elective	3	0	3
MAT	164	Calculus with Analytic Geometry II	4	0	4
PHI	202	Logic	3	0	3
		*MAT or CST Elective	2-4	0-2	3-4
		Social Science Elective	3	0	3
PED		Physical Education Elective	0	2	1
			15-17	2-4	17-18

SECOND YEAR Fall Semester

HIS		History Elective	3	0	3
		*MAT or CST Elective	2-4	0-2	3-4
		*MAT or CST Elective	2-4	0-2	3-4
		Laboratory Science Sequence	3	3	4
		* * Approved Elective	2-4	0-3	3-4
			12-18	3-10	16-19

Spring Semester

MAT	252	Mathematical Modeling with the Computer	4	0	4
MAT	264	Linear Algebra	4	0	4
		Laboratory Science Sequence	3	3	4
		* * Approved Elective	2-4	0-3	3-4
			13-15	3-6	15-16

*MAT 114 Statistics, MAT 153 and 154 Discrete Math I and II, MAT 243 Differential Equations, MAT 263 Calculus III, MAT 266 Introduction to Higher Math. Any CST course except CST 110.

* * Chosen with career goal and transfer institution in mind and approved by Department Chairperson

GRADUATION REQUIREMENT: 65 CREDITS

DATA PROCESSING (Associate in Applied Science Degree)

FIRST YEAR Fall Semester

			Hours per Week		Credits
			Class	Lab	per Semester
BUS 100	Accounting I	.....	4	0	4
BUS 115	Business Statistics	.....		
	or	.....	3	0	3
MAT 114	Statistics	.....		
CST 111	Introduction to Computer Studies	.....	3	0	3
CST 115	Problem Solving with Pascal	.....	2	2	3
ENG 110	Written Expression I	.....	3	0	3
			15	2	16

Spring Semester

BUS 101	Accounting II	.....	4	0	4
CST 100	BASIC - (½ semester)	.....	1	2	1
CST 118	Computer Programming—COBOL	.....	2	2	3
ENG 120	Written Expression II	.....	3	0	3
MAT 121	Finite Mathematics	.....	3	0	3
SPK 100	Basic Speaking	.....		
	or	.....	2-3	0	2-3
SPK 102	Effective Speaking	.....		
			15-16	4	16-17

SECOND YEAR Fall Semester

BUS 157	Business Report Writing	.....	3	0	3
CST 116	RPG II	.....	2	2	3
CST 218	Advanced COBOL	.....	2	2	3
PHS 111	Physical Science for Today	.....	2	2	3
	Social Science Elective	.....	3	0	3
			12	6	15

Spring Semester

BUS 270	Decision Making	.....	3	0	3
CST 120	Computer Programming—FORTRAN	.....		
	or	.....	2	2	3
CST 122	Scientific Computer Programming—FORTRAN	.....		
CST 200	Systems Analysis	.....	2	2	3
CST 217	Advanced RPG II	.....	2	2	3
	Social Science Elective	.....	3	0	3
			12	6	15

GRADUATION REQUIREMENT: 62 CREDITS

Students working on computer programs in the College's Computer Center.



DATA PROCESSING—TECHNICAL (Associate in Applied Science Degree)

FIRST YEAR Fall Semester

			Hours per Week		Credits
			Class	Lab	per Semester
CST 111	Introduction to Computer Studies	.....	3	0	3
CST 115	Problem Solving with Pascal	.....	2	2	3
ENG 110	Written Expression I	.....	3	0	3
MAT 114	Statistics	.....	3	0	3
	Laboratory Science Sequence	.....	3	2-3	4
			14	4-5	16

Spring Semester

CST 122	Scientific Computer Programming—FORTRAN	.....	2	2	3
ENG 150	Technical Writing	.....	3	0	3
PHI 202	Logic	.....	3	0	3
MAT 153	Discrete Mathematics I	.....	4	0	4
	Laboratory Science Sequence	.....	3	2-3	4
			15	4-5	17

SECOND YEAR Fall Semester

CST 112	Computer Logic	.....	2	2	3
CST 126	Assembly Programming—BAL	.....	2	2	3
CST 205	Advanced FORTRAN with Graphics	.....	2	2	3
MAT 154	Discrete Mathematics II	.....	4	0	4
	Social Science Elective	.....	3	0	3
			13	6	16

Spring Semester

CST 202	Data Structures	.....	2	2	3
CST 220	Introduction to Microprocessors	.....	2	2	3
CST 222	Topics in Computer Systems	.....	3	0	3
SPK 102	Effective Speaking	.....	3	0	3
	Social Science Elective	.....	3	0	3
			13	4	15

GRADUATION REQUIREMENT: 64 CREDITS

DENTAL HYGIENE

DEPARTMENT CHAIRMAN, Dr. Frederick Johnson
Science Building, Room 108
Telephone 772-5149

FIRST YEAR Fall Semester

			Hours per Week		Credits
			Class	Lab	per Semester
BIO	131	Human Biology I	3	2	4
DEN	101	Dental Hygiene I	2	6	4
DEN	103	Oral Anatomy and Physiology	2	4	4
ENG	110	Written Expression I	3	0	3
*MAT		Geometry Module	0	0	0
			10	12	15

Spring Semester

BIO	132	Human Biology II	3	2	4
DEN	102	Dental Hygiene II	2	8	4
DEN	105	Nutrition	3	0	3
DEN	106	Clinical Dental Radiography	1	2	2
BIO	160	Microbiology	2	3	3
SPK	102	Effective Speaking	3	0	3
			14	15	19

SECOND YEAR Fall Semester

DEN	201	Dental Hygiene III	4	12	7
DEN	204	General and Oral Pathology	3	0	3
DEN	205	Periodontology	2	0	2
DEN	213	Public Health	3	0	3
PSY	110	General Psychology	3	0	3
			15	12	18

Spring Semester

DEN	202	Dental Hygiene IV	2	12	5
DEN	206	Dental Pharmacology	2	0	2
DEN	210	Dental Materials	2	2	3
DEN	214	Dental Specialties	2	0	2
SOC	110	Introduction to Sociology	3	0	3
			11	14	15

NOTE: The Dental Hygiene Department recommends that dental hygiene students wear safety glasses during pre-clinical and clinical procedures, especially the individual wearing contact lenses.

*This can be waived if the student has previously taken geometry or a geometry module. Geometry is a prerequisite for DEN 106 Clinical Dental Radiography.

The Dental Hygiene curriculum is designed to prepare students for the contemporary practice of dental hygiene. The curriculum emphasizes the fundamental knowledge necessary for practice in a private dental office or similar clinical setting under the supervision of a dentist.

The dental hygienist performs various preventive services, such as dental prophylaxis, topical fluoride applications, dental radiographs and instruction in plaque control procedures. Successful completion of the curriculum permits one to take the required written and practical licensure examinations.

Dental Hygiene graduates averaged \$9,424 as starting salaries in 1979, encompassing a range from

\$10,400 to \$7,000.

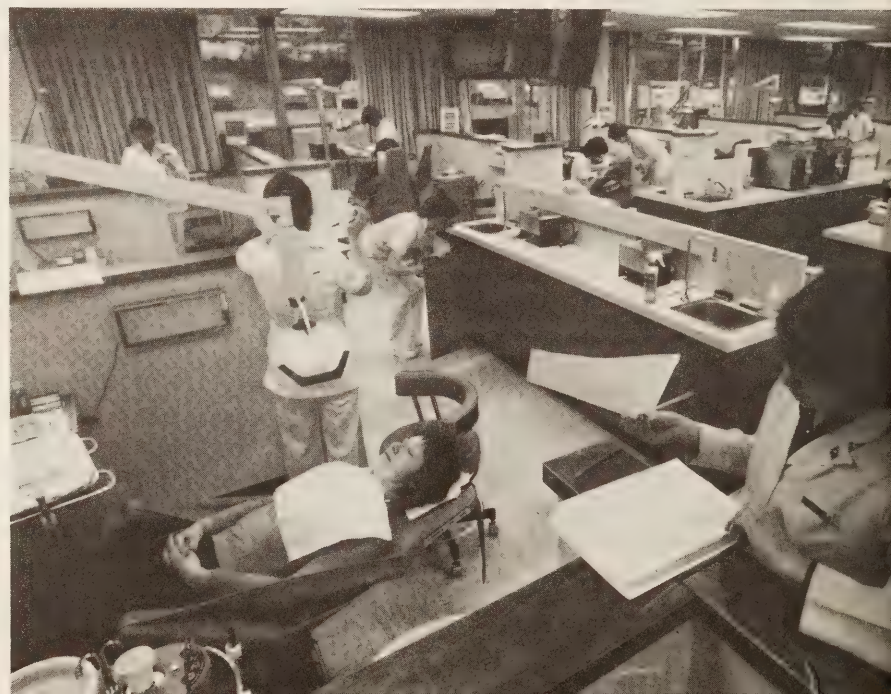
Students must purchase instruments and uniforms which range from \$350-\$400 and pay license examination fees which range from \$120-\$150 in addition to textbooks.

Upon admission into the program all dental hygiene freshmen will be cognitively mapped to determine learning styles.

Students who wish to pursue a career as a dental hygienist in an elementary or secondary school or as a dental hygiene educator at the college level are encouraged to transfer to a baccalaureate program after graduation.

The curriculum is accredited by the Council on Dental Education of the American Dental Association.

An over-all view of the main area of the Doctor James T. Ivory Dental Hygiene Clinic on campus, showing students engaged in clinical activities under the supervision of instructor.



An Electrical Engineering Technology professor assists students during an experiment in the College's Electronics Laboratory.



The Electrical Engineering Technology program at Broome Community College is made up of a planned sequence of college level courses leading to the associate degree, and it is designed to prepare men and women to work in the field of engineering technology. Engineering technology is concerned primarily with the application of established scientific and engineering knowledge and methods.

The graduate of the electrical program is an engineering technician who is trained to be the interface between the graduate engineer and the skilled craftsman.

The technician translates problems into functioning equipment, using his knowledge in mathematics, electronics, circuit analysis and computer technology. He does this whether he is working in a small company as the only technician or in a large company as part of a team.

The technician works for companies like New York State Electric and Gas, International Business Machines, Xerox, Eastman Kodak, General Electric, General Aniline and Film, Universal Instruments, Raymond Corporation, National Cash Register, Bell Labs and Corning

Glass. Starting positions include technical sales representative, engineering assistant, computer technician, electronics technician or laboratory, field service or test technician. Starting salaries for graduates are ranging between \$11,000 and \$15,000.

Many technicians find that more education is desirable. While their basic education is not transfer-oriented, graduates of Broome Community College have successfully completed advanced study at State University of NY colleges, Rochester Institute of Technology, Clarkson College of Technology, Tri-State College, University of Arizona, University of Houston, University of Miami and others.

The program is fully accredited by the Accreditation Board for Engineering and Technology (ABET), which was formerly the Engineers Council for Professional Development (ECPD).

State University of NY at Binghamton offers a Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline, such as Electrical Engineering Technology.

ELECTRICAL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, Robert Reid
Electrical Building, Room 101
Telephone 772-5017

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CST	122	Scientific Computer Programming—FORTRAN	2	2	3
EET	111	Electrical Construction Laboratory I	1	3	2
EET	121	Electrical Circuits	4	3	5
EGR	110	Introduction to Technologies	1	0	½
ENG	110	Written Expression I	3	0	3
MAT	141	College Algebra and Trigonometry	4	0	4
			15	8	17½

Spring Semester

EET	112	Electrical Construction Laboratory II	0	3	1
EET	130	Engineering Drawing	0	3	1
EET	150	Electronics I	4	3	5
EET	162	Computer Aided Network Analysis	3	0	3
ENG	150	Technical Writing	3	0	3
MAT	142	Applied Calculus I	4	0	4
			14	9	17

SECOND YEAR Fall Semester

EET	241	Electrical Machines and Controls I	3	3	4
EET	251	Electronics II	3	3	4
PHY	141	Physics	3	2	4
EET	267	Digital Electronics and Microprocessors	3	2	4
		Social Science Elective	3	0	3
			15	10	19

Spring Semester

EET	230	Electronic Design and Fabrication	0	3	1
EET	242	Electrical Machines and Controls II	4	3	5
EET	252	Electronics III	3	3	4
PHY	144	Physics II-E	3	2	4
		Social Science Elective	3	0	3
			13	11	17

GRADUATION REQUIREMENT: 70½ CREDITS

ENGINEERING SCIENCE

DEPARTMENT CHAIRMAN, Jack Foster
Titchener Hall, Room 221
Telephone 772-5114

The Engineering Science curriculum is designed primarily to prepare graduates to continue their studies in the various engineering disciplines at four-year colleges and universities. The strong emphasis on mathematics and physics also allows graduates to transfer to these majors at four-year institutions, with junior-year standing. In addition, there are immediate employment possibilities for qualified graduates who wish to terminate or postpone further educational goals until a more opportune time.

Broome Community College is a member of the New York State Two-Year/Four-Year Engineering College Curriculum Study Committee. The purpose of this organization is to facilitate the transfer to four-year colleges, with junior-year standing, of two-year college graduates from engineering science programs. Rensselaer Polytechnic Institute (RPI), Clarkson, Rochester Institute of Technology (RIT), Cornell, Syracuse, Union, and State University of New York at Buffalo and at Stony Brook are among the members of the Study Committee who have agreed to accept those two-year col-

lege graduates who have been recommended by their Engineering Science departments. Feedback from these and other institutions to which Broome Community College students transfer indicate a high regard for the graduates and the quality of the Engineering Science program at BCC.

Those graduates who prefer to seek immediate employment will find job opportunities as engineering technicians or as assistants to engineers involved in research and development. In addition, employment opportunities also exist which involve the application of mathematics and computer programming.

Students entering Broome Community College who wish to continue studying for their bachelor's degrees in engineering, applied mathematics, or physics will find the Engineering Science program the most appropriate course of study. As a reasonable guideline for successful achievement in this rigorous program, a student's course work in high school should be above the 80% level in all areas.

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
CHM 145	Chemistry	3	3	4
MAT 171	Engineering Calculus with Analytic Geometry I	4	0	4
MET 115	Graphics	1	2	2
PHY 181	Engineering Physics I	3	2	4
	English or Literature Elective	3	0	3
		14	7	17

Spring Semester

CHM 146	Chemistry	3	3	4
CST 124	Computer Programming for Engineers	2	2	3
MAT 172	Engineering Calculus with Analytic Geometry II	4	0	4
PHY 182	Engineering Physics II	3	2	4
	English or Literature Elective	3	0	3
		15	7	18

SECOND YEAR Fall Semester

*EGR 281	Mechanics: Statics	3	0	3
EGR 285	Electrical and Electronic Circuits	3	0	3
EGR 287	Engineering Science Laboratory I	0	3	1
MAT 271	Engineering Calculus with Analytic Geometry III	4	0	4
PHY 281	Engineering Physics III	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		16	5	18

Spring Semester

*EGR 282	Mechanics: Dynamics	3	0	3
EGR 286	Engineering Analysis	1	0	1
EGR 288	Engineering Science Laboratory II	0	3	1
MAT 272	Differential Equations with Linear Algebra	4	0	4
PHY 282	Engineering Physics IV	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		14	5	16

*Or approved Engineering optional course

GRADUATION REQUIREMENT: 69 CREDITS



Engineering Science Students programming a graphics display pattern on one of the college's desk computers in the department's Computer Laboratory.

INDIVIDUAL STUDIES

DEPARTMENT CHAIRMAN, Francis J. Short
Department of Special Career Programs
Mechanical Building, Room 219
Telephone 772-5087



To better meet the changing times and to provide an opportunity for students with unusual needs, Broome Community College allows **selected students** the opportunity to take a personally planned degree program. This program requires that the student develop, with an advisor, an "area of concentration." **This area of concentration must be a cohesive body of knowledge which the student can justify as having both educational and personal relevance.**

Completion of the Individual Studies Program can lead to an Associate in Science (AS) or Associate in Applied Science (AAS) degree, depending on the student's area of concentration. The AS degree program is designed for maximum transfer possibilities, and the AAS degree program has better immediate employment opportunities. **Admission into the program requires development of a Plan of Studies which is approved by the department chairman. This plan is developed by the student with a specific educational or career goal in mind.**

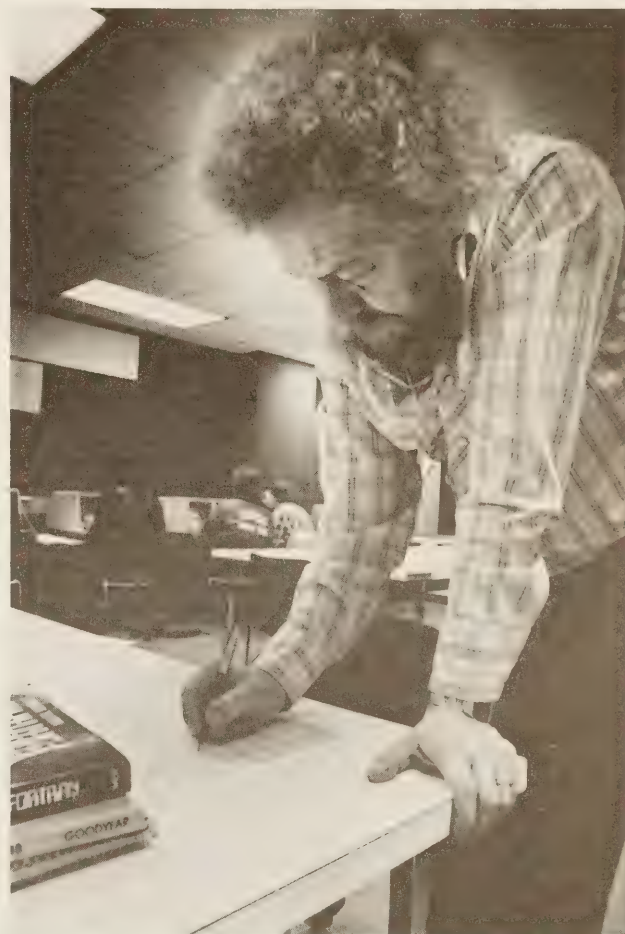
Associate in Science Degree (60 credits)

- 30 Credits in English, Humanities, Natural Sciences, Mathematics and Social Sciences.
- 30 Credits in student's Area of Concentration

Associate in Applied Science Degree (60 credits)

- Minimum of 20 semester credits in Liberal Arts and Sciences to include:
 - 6 Credits in Humanities (maximum of 3 hours in Speech)
 - 6 Credits in Social Science
 - 8 Credits in Natural and Physical Science, including Mathematics
- 10 Credits of Technical Electives
- 30 Credits in student's Area of Concentration

For additional information contact the Department Chairman.



DIVISION DEAN, George Higginbottom
Titchener Hall, Room 121
Telephone 772-5031

The Liberal Arts curriculum is mainly a two-year university-parallel program designed especially for those who wish to continue their college education at a four-year school. Graduates of the College in its Liberal Arts program receive either the Associate in Arts or Associate in Science degrees, depending on which course of study they complete.

Students completing this curriculum, its science option or its other emphases will have a breadth of education that prepares them for many professional careers. The Science Option, for example, is excellent for those planning careers in forestry, chemistry, biology or other

scientific areas. Those aspiring to become teachers, doctors, dentists, lawyers, pharmacists or law-enforcement officers will find alternatives in the Liberal Arts curriculum designed especially for them.

Students should be aware that many of these alternative curriculums presume a high level of preparation in the secondary school, and they should consult with faculty advisors or counselors when there is doubt about the adequacy of their pre-college academic background.

To qualify for any degree at Broome Community College, students must present a cumulative grade point average of 2.0 or above.

Liberal Arts students at work in a sculpturing class.



Career Preparation

For a great number of careers a rich background in liberal studies, as is presented in the Associate in Arts (AA) and Associate in Science (AS) degree programs, is essential. Students are urged to utilize the college resources thoroughly, and as early as practicable, in locating useful information about their intended academic majors and their career aspirations.

The Liberal Arts advisement system is one which aims to match students with advisors who share their interests. If questions pertaining to career preparation, transfer opportunities and job placement cannot be answered by the faculty advisors, students will be directed to somebody who can. Key figures in the advisement picture are:

Academic Advisor

Counselor

Placement Officer

To start students thinking about a career and the preparation needed, a number of fields which suggest a Liberal Arts beginning is listed below. The college does not offer courses in all these areas, and in some cases the professional courses are taught at the junior/senior level in baccalaureate programs.

Advertising
Architecture
Art
Child Care
Communications
Community/Human Service
Computing
Counseling
Criminal Justice
Data Processing
Design
Energy Research
Environmental Affairs
Foreign Service
Government Service
Home Economics
Interior Design
International Business
Labor Relations
Library Science

Management
Medicine
Oceanography
Optometry
Personnel
Public Relations
Public Service
Publishing
Real Estate
Recreation
Social Work
Scientific Research
Sports Writing
Teaching
Technical Writing
Translating
Transportation
Travel/Tourism
Urban Planning

Communication With Students

The division maintains Bulletin Boards in the Titchener Hall lobby and outside the office in Titchener Hall, Room 121. Students are urged to check the boards regularly for information pertaining to academic advisement, career planning, cultural events, transfer opportunities, convocations and lectures, concerts, and the like. Important notices and messages for students will also be posted. **Check the boards!**

Academic Advisement

FULL-TIME STUDENTS

Every full-time student is assigned a faculty advisor. During the first few weeks of classes, students should meet with their advisors to discuss academic and career plans.

Students are *encouraged* to meet regularly with their advisors thereafter. All students are required to complete in the presence of their advisors a Registration Advisement Form prior to registering in subsequent semesters.

The Liberal Arts office personnel is available to deal with special problems relating to academic requirements and transfer. While the faculty and staff will make every reasonable effort to help students with academic planning, students must also assume responsibility for their programs and, particularly, in meeting degree requirements.

PART-TIME STUDENTS

Part-time day students who intend to matriculate in a degree program sponsored by the Liberal Arts Division should come to the office (Room 121 in Titchener Hall) to be assigned academic advisors. Students not interested in a degree, but, nevertheless, seeking academic advice, may do so in the Liberal Arts office. Part-time evening students will be advised by representatives from the Office of Continuing Education.

Transfer

Students who have earned A.A. or A.S. degrees at Broome Community College and who intend to go on for baccalaureate degrees are guaranteed transfer to a four-year college or university of the State University of New York (SUNY). There is no guarantee, however, that students can complete all degree programs at transfer institutions in four semesters.

Students are urged to learn as much as they can relative to program requirements at the institution(s) to which they might transfer. For example, many four-year schools require foreign language. The decision to take a language at Broome Community College might thus be influenced by whether or not it is required at the college to which one intends to transfer.

The Liberal Arts Division is in the process of establishing guaranteed transfer arrangements with other public and private colleges. Inquiries about these agreements, some in force and some in progress, should be made in Titchener Hall, Room 121.

Associate In Arts Degree

Credits
Required
Per Year

English	6
ENG 110 and 120 Written Expression I and II	
History	6
HIS 100 The Rise of the West plus one other history (HIS) course.	
Mathematics or elective (as advised)	0-8
Students who have completed fewer than 3 units of secondary school mathematics (through Intermediate Algebra) are required to take a minimum of 2 semesters of college level mathematics.	
... Students who have completed 3 units of secondary school mathematics (through Intermediate Algebra) are required to take one semester of college level mathematics. . . .	
Students who have completed more than 3 units of secondary school mathematics (including Intermediate Algebra) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.	
Laboratory Science	8
A full-year <i>sequence</i> of biology, chemistry, physics or physical science. Acceptable sequences: BIO 111-112 General Biology I and II; BIO 131-132 Human Biology I and II; CHM 141-142 General Chemistry; CHM 145-146 Chemistry; PHY 161-162 Physics; PHS 113, 115, or 116 Physical Science (any 2).	
Philosophy or Foreign Language Sequence	6-8
Students are encouraged to take both, but they must complete a year (6-8 credits) of philosophy or a foreign language.	
Physical Education	2
No more than 2 credits can be used to fulfill degree requirements.	
Literature	6
Any 2 LIT. courses.	
Social Science	6
Any 2 courses from the following disciplines—anthropology, economics, geography, political science, psychology, sociology, social sciences. These have ANT, ECO, GEO, POS, PSY, SOC, SOS designators.	
Electives	14-24
A maximum of 15 credits may be taken outside the offerings of the Liberal Arts and Sciences division with the approval of the Dean of the LA Division.	
Total number of credits	64 minimum

MODEL PROGRAMS (All Earn Associate In Arts Degree)

These models are suggested sequences of study for students who have decided on the major or field indicated. The arrangement of courses and specific recommendations are based on:

- 1—a variety of similar programs at four-year colleges to which many BCC students transfer.
- 2—immediately acquainting the students with their chosen field.
- 3—completing prerequisites for later courses.
- 4—fulfilling the common Associate in Arts degree requirements.

THESE MODELS ARE GUIDES AND SHOULD NOT BE REGARDED AS INFLEXIBLE.

The models are displayed in two-year arrangements. However, many students may be more successful if they plan a 2½ or 3-year program of study. For example, Art, the first model displayed, is also presented in a possible 3-year arrangement.

ART		BUSINESS	
FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)	FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
Written Expression I & II (6) History 100 (3) Any Mathematics (0-8) Philosophy or Foreign Language Sequence (6-8) *Humanities: PHI 111, 112, (6) Any Physical Education (2) Electives †Intro. to Art (3) †Studio Courses (6)	Any History (3) Lab Science Sequence (8) †Human Biology Any Literature (6) Any Social Science (6) Electives †additional art, studio, and/or design courses	Written Expression I & II (6) History 100 & any other HIS Course (6) Mathematics (0-8) *MAT 114, 122 or 163 Any Philosophy or Foreign Language Sequence (6-8) Any Physical Education (2) Electives (8) *Accounting I & II	Any Lab Science Sequence (8) Any Literature (6) Social Science (6) *ECO 110, 111 Electives †BUS 245 Management: A Behavioral Approach †CST 110 Intro. to Data Processing †BUS 249 Principles of Personnel Management †CST Computer Language Course
This three-year model is for example purposes only:			
ART—Three Year Program		CRIMINAL JUSTICE	
FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)	FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
Basic Language Skills (3) Written Expression I (3) College Reading: RDG (1-3) Learning Skills Sequences LRS (2) Individual in a Changing Environment: SAC 101 (3) Intro. to Art (3) Studio Art-Drawing (3) Physical Education (2)	Basic Math Review Humanities (6) Social Science (6) Studio Art-Painting I & II (6) Lab Science Sequence (8) THIRD YEAR Courses (Credits) Mathematics (8) Literature (6) History (6) Electives	Written Expression I & II (6) History 100 and any other HIS course (6) Mathematics (0-8) †MAT 117 or 121 followed by MAT 114 Statistics Social Science (6) *General Psychology *Intro. to Sociology Electives (6) †CRJ 100 Survey of Law Enforcement & one other CRJ course Any Physical Education (2)	Lab Science Sequence (8) *CHM 141 or 145 followed by CHM 149 Any Philosophy or Foreign Language Sequence (6-8) Literature (6) †Prison Literature Electives †3 CRJ courses †social science courses
CHILD CARE		FOREST MANAGEMENT	
FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)	FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
Written Expression I & II (6) Any Mathematics (0-8) Lab Science Sequence (8) *Human Biology Any Physical Education (2) Social Science (6) *General Psychology *Intro. to Sociology Electives: (6) *Intro. to Education of Young Children—prerequisite to other Child Care (CDC) courses—and an additional CDC course	History 100 & any other HIS course (6) Any Philosophy or Foreign Language Sequence (6-8) Literature (6) *Children's Literature Electives †additional CDC courses †additional psychology & sociology courses †Children's Theater †Creative Dramatics	Written Expression I & II (6) History 100 & any other HIS course (6) Mathematics (0-8) *MAT 163, 164 Lab Science Sequence (8) *BIO 111, 112 Any Physical Education (2) Electives (8) *CHM 145, 146 Chemistry	Any Philosophy or Foreign Language Sequence (6-8) Any Literature (6) Social Science (6) *ECO 110, 111 Electives †General Psychology or Intro. to Sociology †Physical Science—Environment †Technical Writing †Effective Speaking †American Political System
INTERIOR DESIGN			
FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)		
Written Expression I & II (6) HIS 100 & any other HIS course (6) Mathematics (0-8) †Math, A Liberal Art Philosophy or Foreign Language Sequence (6-8) †PHI 111, 112 Electives (6) *Intro. to Design *History of Architecture Physical Education (2)	Any Lab Science Sequence (8) Any Literature (6) Social Science (6) †General Psychology Electives (6) *additional design courses *art courses *CIV 115 Engineering Drawing *CIV 159 Architectural Drafting		

*THESE COURSES ARE "STRONGLY RECOMMENDED" FOR THE PROGRAMS INDICATED

†THESE COURSES ARE "RECOMMENDED" FOR THE PROGRAMS INDICATED

MODEL PROGRAMS

PRINT JOURNALISM

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 & any other
HIS course (6)
Any Mathematics (0-8)
Any Lab Science
Sequence (8)
Any Philosophy or
Foreign Language
Sequence (6-8)
Any Physical Education
(2)

SECOND YEAR Courses (Credits)

Any Literature (6)
Social Science (6)
†Consumer Economics
†Micro & Macro
Economics
Electives
†additional writing
courses
†additional social
science courses
†Media & Culture
†Effective Speaking

LANDSCAPE ARCHITECTURE

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 & another
HIS course (6)
†HIS 131
Mathematics (0-8)
†MAT 139, 140
Lab Science Sequence
(8)
*BIO 111, 112
Any Philosophy or
Foreign Language
Sequence (6-8)
Any Physical Education
(2)

SECOND YEAR Courses (Credits)

Any Literature (6)
Any Social Science (6)
(excluding SOS
courses)
Electives
*MET 115 Graphics
*CIV 111 Surveying 1
*CST 110 Intro. to
Data Processing
*ART 115 Studio Art-
Drawing
*PHS 116 Physical
Science—Environ-
ment
*PHY 161, or 117
Physics

PRE-LAW

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 & any other
HIS course (6)
Mathematics (0-8)
†highest level course
for which student
qualifies
Any Lab Science
Sequence (8)
Philosophy or Foreign
Language Sequence
(6-8)
*foreign language
sequence
Any Physical Education
(2)

SECOND YEAR Courses (Credits)

Any Literature (6)
Social Science (6)
†ECO 110, 111
Electives
†Political Science
POS 201, 204
†Economics ECO 130
†Philosophy PHI 202
†advanced foreign
language course

PHYSICAL THERAPY

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
Mathematics (0-8)
†at least to
Trigonometry,
preferably to
Calculus
Lab Science Sequence
(8)
*General Biology
Any Physical Education
(2)
Social Science (3)
*General Psychology
Electives (8)
*CHM 145, 146
Chemistry

SECOND YEAR Courses (Credits)

History 100 & any other
HIS course (6)
Any Philosophy or
Foreign Language
Sequence (6-8)
Any Literature (6)
Social Science (3)
*a psychology course
Electives
*PHY 161, 162
Physics
*Intro. to Sociology
*additional psychology

PHYSICAL EDUCATION

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 and any
other HIS course (6)
Any Mathematics (0-8)
Lab Science Sequence
(8)
*Human Biology
Any Philosophy or
Foreign Language
Sequence (6-8)
Any Physical Education
(2)

SECOND YEAR Courses (Credits)

Any Literature (6)
Social Science (6)
*General Psychology
Electives
†General Biology
†Effective Speaking
Students are encouraged
to become involved in
additional physical
education activities

MUSIC

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 & any other
HIS course (6)
Any Mathematics (0-8)
Philosophy or Foreign
Language Sequence
(6-8)
†PHI 111, 112 or
Italian
Any Physical Education
(2)
Electives (6)
†Intro. to Music Theory

SECOND YEAR Courses (Credits)

Any Lab Science
Sequence (8)
Any Literature (6)
Any Social Science (6)
Electives
†additional music
courses

RECREATION LEADERSHIP

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 and any
other HIS course (6)
Any Mathematics (0-8)
Lab Science Sequence
(8)
*Human Biology
Philosophy or Foreign
Language Sequence
(6-8)
†foreign language
Any Physical Education
(2)

SECOND YEAR Courses (Credits)

Any Literature (6)
Social Science (6)
*General Psychology
*Adolescent or Child
Psychology
Electives
†additional psychology
courses
†art, music, theater,
speech, fine arts
courses

SPECIAL EDUCATION

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 (3)
Any Mathematics (0-8)
Lab Science Sequence
(8)
*Human Biology
Any Philosophy or
Foreign Language
Sequence (6-8)
Any Physical Education
(2)
Social Science (3)
*General Psychology

SECOND YEAR Courses (Credits)

Any History (3)
Any Literature (6)
Social Science
*psychology
Electives
†Effective Speaking
†Fine Arts
†General Biology
†additional psychology

THEATER

FIRST YEAR Courses (Credits)

Written Expression
I & II (6)
History 100 & any other
HIS course (6)
Any Mathematics (0-8)
Any Philosophy or
Foreign Language
Sequence (6-8)
Any Physical Education
(2)
Electives (6)
*Intro. to Theater
*An Acting course

SECOND YEAR Courses (Credits)

Any Lab Science
Sequence (8)
Literature (6)
†World Drama
†American Drama
Social Science (6)
†Psychology
Electives
†additional theater
courses

*THESE COURSES ARE "STRONGLY RECOMMENDED" FOR THE PROGRAMS INDICATED
†THESE COURSES ARE "RECOMMENDED" FOR THE PROGRAMS INDICATED

LIBERAL ARTS AND SCIENCES

Associate In Science Degree Science Option

This program is designed for students planning careers in forestry, chemistry, biology, or other science areas.

FIRST YEAR		Credits Required Per Year
English	ENG 110 and ENG 120 Written Expression I and II	6
History	HIS 100 The Rise of the West and any other history (HIS) course	6
Mathematics	MAT 163 and MAT 164 Calculus with Analytic Geometry I and II or if a student is not prepared for these courses, he or she may take MAT 139 Algebra or MAT 140 Trigonometry and MAT 161 Pre-Calculus Mathematics.	6-8
2 Laboratory Science Sequences	BIO 111 and BIO 112 General Biology I and II and CHM 145 and CHM 146 Chemistry for those planning careers in medicine, veterinary medicine, dentistry, forest biology, marine biology, pharmacy or forest chemistry.	16
Physical Education	Any 2 PED courses.	2

SECOND YEAR

Literature	Any 2 LIT courses	6
Social Science	Any 2 courses from the following disciplines—anthropology, economics, geography, political science, psychology, sociology, social science. These have ANT, ECO, GEO, POS, PSY, SOC and SOS designators.	6
2 Laboratory Science sequences	PHY 161 and 162 Physics and CHM 245 and 246 Organic Chemistry for those planning careers in medicine, veterinary medicine, dentistry, forest biology, marine biology, pharmacy or forest chemistry.	16
Mathematics, Philosophy or Foreign Language	A student must fulfill the mathematics requirement before he or she can take a philosophy or foreign language course. If a student did not complete MAT 164 Calculus with Analytic Geometry as a freshman, but instead took the other Mathematics courses listed above, then MAT 163 and MAT 164 should be taken now. If the student wishes to take a math course more advanced than MAT 164 and he or she has completed MAT 164, then he or she may take another mathematics course now. If the math requirement has been completed and the student does not elect to take additional mathematics, then he or she is required to take any philosophy or foreign language courses.	6-8
Total number of credits		64 minimum

Mental Health & Retardation Emphasis

This course of study is for students who wish to transfer to upper division degree programs in mental health and human services, and for those seeking entry level preparation for positions in appropriate public and private agencies. Broad preparation during the first year is followed by greater concentration during the second year.

The number of students permitted to enter the second year of the program is limited by the availability of field placement openings in local agencies. Selection will take place during the spring semester of the Freshman year. Students who do not qualify can still complete A. A. degree requirements within the normal two-year period. For further details inquire at the Liberal Arts Division office in Titchener Hall.

FIRST YEAR Fall Semester

			Credits
ENG	110	Written Expression I	3
MAT		(Mat 124 Statistics Recommended)	3-4
HIS	100	Rise of the West Laboratory Science (BIO 131 Human Biology I recommended)	3 4
PSY	110	General Psychology	3
PED		Physical Education Elective	1
			17-18

Spring Semester

ENG	120	Written Expression II	3
SOC	110	Introduction to Sociology	3
PHI	206	Social/Political Philosophy Laboratory Science (BIO 132 Human Biology II recommended)	3 4
		Liberal Arts Elective	3
PED		Physical Education Elective	1
			17

SECOND YEAR Fall Semester

			Credits
PSY	223	Intelligence and the Mentally Retarded	3
PSY	217	Counseling and Interviewing	3
		English or Humanities Elective	3
SOS	288	Seminar in Community Social Service Organizations	3 3
		Liberal Arts Elective	3
			15

Spring Semester

PSY	227	Behavior Modification	3
PSY	214	Abnormal Psychology	3
		Any 2 Liberal Arts Electives	6
SOS	290	Social Science Field Work*	3
			15

*This internship experience generally involves 6 hours a week in one of the following agencies—Binghamton Psychiatric Center, Broome Developmental Center, Association for Retarded Children, Broome County Social Services, Broome County Juvenile Aid Bureau, Broome County Office for the Aging, Binghamton Outreach Program, PROBE, American Red Cross, Planned Parenthood, Wilson Memorial Hospital Extended Care.

ONE-PLUS-ONE PROGRAMS

The first year for these degree programs is taken at Broome Community College and the second year at the colleges indicated. Those colleges have agreed to accept for transfer the students who have completed at BCC the first year of courses cited.

HOTEL-RESTAURANT TECHNOLOGY 1st Year at Broome CC Courses (Credits) Liberal Arts Social Sciences (6) English (6) Science or Math (6) Arts & Science Elective (3) Physical Education (3) Accounting I (3) Second Year at Delhi Ag Tech College	ARCHITECTURAL TECHNOLOGY 1st Year at Broome CC Courses (Credits) Intro. Technologies (½) Engineering I Social Science Elective (3) College Algebra-Trig. (4) Physics (4) Written Expression (3) Statics & Str. Materials (4) Architectural Drafting (3) Building Design (3) English (3) Mathematics (3) Physical Education (1) Second Year at Delhi Ag Tech College
GENERAL AGRICULTURE 1st Year at Broome CC Courses (Credits) Written Expression I (3) General Biology I (4) Introduction to Micro-Economics The Individual in a Changing Environment (3) Chemistry (CHM 135 or CHM 145) (4) Written Expression II (3) General Biology II (4) Physical Education (1) Social Science Course (3) Chemistry (CHM 136 or CHM 146) (4) Mathematics Course (3) Second Year at Delhi Ag Tech College	ANIMAL HUSBANDRY DAIRY 1st Year at Broome CC Courses (Credits) Written Expression I (3) Intro. to Micro-Economics (3) General Biology I (4) Chemistry (4) Mathematics (3) Written Expression II (3) General Psychology (3) or Intro. to Sociology (3) General Biology II (4) Chemistry (4) Physical Education (1) Second Year at Delhi Ag Tech College
DAIRY AND FOOD SERVICE 1st Year at Broome CC Courses (Credits) Freshman English (3) General Biology I (4) Chemistry (4) Social Science Elective (3) Mathematics (3-4) Freshman English (3) or Technical Writing (3) Microbiology (4) Chemistry (4) Social Science Elective (3) Physical Education (1) Second Year at Canton Ag Tech College	AGRICULTURAL ENGINEERING 1st Year at Broome CC Courses (Credits) Freshman English (3) Physics (4) Mathematics (3-4) Social Science Elective (3) Physical Education (1) Elective (Optional) (0-3) Freshman English or Technical Writing (3) Physics (4) Marketing (3) Social Science Elective (3) Mathematics or Elective (3-4) Second year at Canton Ag Tech College
FOREST TECHNOLOGY 1st Year at Broome CC Courses (Credits) English Biology (or Botany and Zoology) Math (Algebra and Trigonometry) Economics Electives Second Year at College of Environmental Science and Forestry at Wanakena	

SCIENCE LABORATORY TECHNOLOGY Biology Option 1st Year at Broome CC Courses (Credits) Freshman English (3) General Biology I (4) Chemistry (4) Mathematics (3-4) Physical Education (1) Social Science Elective (3) Freshman English (3) General Biology II (4) Chemistry (4) Microbiology (4) Mathematics or Elective (3-4) Second Year at Canton Ag Tech College	MORTUARY SCIENCE 1st Year at Broome CC Courses (Credits) Freshman English (3) Business Arithmetic (3) Human Bio. or Human Anat. & Physics (4) Social Science Elective (3) Business Law I (3) Physical Education (1) Effective Speaking (3) Accounting I (4) Human Anat. & Phys. (4) or Communication in Business (4) Intro. to Business* (3) Social Science Elective (3) *should substitute for our Business Organization and Mgt. Second Year at Canton Ag Tech College
AGRONOMY/HORTICULTURE 1st Year at Broome CC Courses (Credits) Freshman English (3) General Biology I (4) Chemistry (4) Mathematics (3-4) Social Science Elective (3) Physical Education (1) Freshman English (ENG 120) or Technical Writing (3) General Biology II or Botany (4) Marketing (3) Social Science Elective (3) Mathematics or Elective (0-3) Second year at Canton Ag Tech College	

ANIMAL HUSBANDRY 1st Year at Broome CC Courses (Credits) General Biology I (4) Freshman English (3) Chemistry (4) Mathematics (3-4) Social Science Elective (3) Physical Education (1) Freshman English or Technical Writing (3) General Biology II Marketing (3) Social Science Elective (3) Mathematics or Elective (3) Second Year at Canton Ag Tech College	CONSTRUCTION TECHNOLOGY 1st Year at Broome CC Courses (Credits) Intro. Technologies (½) College Alg.-Trig. (4) Physics (4) Written Expression (3) Social Science Elective (3) Engineering Dwg. I (2) English (3) Social Science (3) Mathematics Elective (3) Surveying I (4) Arch. Drafting (3) Building Design (3) Second Year at Delhi Ag Tech College
GENERAL AGRICULTURE 1st Year at Broome CC Courses (Credits) Freshman English (3) General Biology I (4) Chemistry (4) Mathematics (3-4) Social Science Elective (3) Physical Education (1) Freshman English or Technical Writing (3) General Biology II or Botany (4) Marketing (3) Social Science Elective (3) Mathematics or Elective (0-3) Second Year at Canton Ag Tech College	



Mechanical Engineering Technology students operate electrical discharging machine equipment in the College's Manufacturing Process Laboratory.

MECHANICAL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, Herbert Durst
Mechanical Building, Room 117
Telephone 772-5023

The continuing thrust for faster and more economical manufacturing methods, more reliable systems and the need for new, clean and consistent sources of energy has generated an increased demand for mechanical engineering technicians with a high degree of technical competence.

The curriculum outline of courses encompasses a blend of mathematics, science, English, social science and technical specialties conceived to generate the necessary background for a variety of entry positions in Mechanical Engineering Technology. These entry positions usually align closely with and support mechanical engineering or related functions.

Recent graduates have been employed in areas of design-drafting, product design, quality control, metallurgy, heat-power, purchasing, sales, technical writing and system maintenance. They could be hired as technicians in quality control,

mechanical research, maintenance, customer engineering or in technical sales. Job opportunities exist both locally and nationally, and starting salaries for 1979 graduates ranged between \$9,000 and \$14,200.

Recruitment of graduates for employment by companies large and small is active year-round. Mechanical Engineering Technology is a particularly lucrative field for the female. Although few have ventured into the field, those who have are highly successful and happy.

This curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET), which was formerly the Engineers Council for Professional Development (ECPD).

State University of NY at Binghamton offers a Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline, such as Mechanical Engineering Technology.

MARKETING PROGRAMS

**Leading to Associate in Applied
Science Degree on Pages 31 and 32.**

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
EGR	110	Introduction to Technologies	1	0	1/2
MAT	141	College Algebra and Trigonometry	4	0	4
MET	113	Engineering Drawing I	1	2	2
MET	121	Manufacturing Processes I	2	2	3
PHY	141	Physics	3	2	4
ENG	110	Written Expression I	3	0	3
		Social Science Elective	3	0	3
			17	6	19 1/2

Spring Semester

MAT	142	Applied Calculus I	4	0	4
MET	114	Engineering Drawing II	1	2	2
MET	122	Manufacturing Processes II	1	3	2
MET	132	Applied Mechanics	4	0	4
PHY	142	Physics	3	2	4
ENG		English Requirement	3	0	3
			16	7	19

SECOND YEAR Fall Semester

CST	122	Scientific Computer Programming— FORTRAN	2	2	3
EET	185	Electricity	2	3	3
MET	235	Strength of Materials	2	3	3
MET	241	Fluid Mechanics and Thermodynamics	2	3	3
MET	261	Engineering Statistics, Quality Control and Reliability	2	2	3
		Social Science Elective	3	0	3
			13	13	18

Spring Semester

EET	186	Electronics	2	3	3
MET	238	Mechanical Design	3	3	4
MET	252	Engineering Materials and Industrial Processes	3	3	4
MET	244	Thermodynamics	2	3	3
		* Technical Elective	(2-3)	(2-0)	(3)
			10-13	1-	
				2-14	14-17

*Waiver of the elective is possible only with the approval of the Department Chairperson. It is not a degree requirement.

GRADUATION REQUIREMENT: 70 1/2 CREDITS

MEDICAL LABORATORY TECHNOLOGY

DEPARTMENT CHAIRMAN, George Ferrari
901 Front Street
Telephone 772-5067

The demand for medical laboratory technicians continues to increase, with the majority finding employment in hospital clinical laboratories and in analytical, control and research laboratories of chemical and pharmaceutical companies. Others are employed as research assistants at large universities and still others have continued their higher education toward the baccalaureate in this field at a four-year college or university.

Some graduates also become quality control technicians or laboratory technicians. The salary range for graduates has recently been between \$10,100 and \$6,870.

To provide the background necessary for work in these areas, the program includes courses in

chemistry, physiology, microbiology and physics.

Extensive laboratory work in bio-analytical procedures, chemical instrumentation, microbiological and serological techniques and radiation physics helps to develop the skill needed for a wide range of job opportunities.

Work in the sciences is balanced by a program in general education including social sciences, English, and mathematics.

Satisfactory completion of 12 weeks of summer clinic experience is required. While there is no salary or direct credit associated with this experience, it is a vital and integral part of the students' educational experience.

Medical Laboratory Technology students performing a bleeding time determination on a classmate in the College's Hematology Laboratory under instructor supervision.



FIRST YEAR Fall Semester

		Hours per Week		Credits
		Class	Lab	per Semester
BIO	131 Human Biology I	3	2	4
CHM	131 Chemistry	3	3	4
ENG	110 Written Expression I	3	0	3
MAT	124 Statistics	3	0	3
MLT	111 Introduction to Clinical Laboratory Methods and Practices	1	2	2
		13	7	16

Spring Semester

BIO	132 Human Biology II	3	2	4
BIO	150 Microbiology I	3	3	4
CHM	132 Chemistry	3	3	4
MLT	112 Hematology	2	4	3
ENG	120 Written Expression II	3	0	3
SPK	102 Effective Speaking	3	0	3
		14	12	18

Summer Term

*Summer Clinical Laboratory of 6 weeks

SECOND YEAR Fall Semester

CHM	221 Organic Chemistry	2	3	3
MLT	211 Clinical Chemistry I	2	6	4
MLT	251 Microbiology II (Diagnostic)	3	4	4
PHY	117 Physics	2	2	3
	Social Science Elective	3	0	3
		12	15	17

Spring Semester

CHM	222 Organic Chemistry	2	3	3
CHM	224 Instrumental Analysis	2	6	4
MLT	212 Clinical Chemistry II	2	6	4
MLT	222 Clinical Physiology	2	0	2
MLT	232 Blood Banking and Serology	2	2	3
	Social Science Elective	3	0	3
	(ECO 107 Medical Economics and Law recommended)			
		13	17	19

Summer Term

*Summer Clinical Laboratory of 6 weeks.

*GRADUATION REQUIREMENT

MEDICAL OFFICE ASSISTANT

DEPARTMENT CHAIRPERSON, Mary Schum
Library, 2nd Floor, Room 14
Telephone 772-5128

A Medical Office Assistant (or Medical Assistant) is one of the most versatile of all the allied health professionals. There are a variety of job opportunities available for individuals with associate degrees. These are in physician's offices, medical centers, clinics, hospitals, armed services, laboratories and pharmaceutical companies. One can also find employment in public, industrial, school, and correctional health departments, as well as in the fields of research, publishing and teaching. A medical assistant can continue education in such fields as allied health services, health care management, and teaching. The program is designed to enable graduates to do both administrative assisting and clinical/laboratory assisting.

By studying such specifically related subjects as medical assisting procedures, clinical laboratory procedures and human biology, students can acquire the knowledge and techniques to prepare patients for examinations and assist the physician. These courses also prepare them to perform not only routine medical procedures but also electrocardiography, audiography, urinalysis and hematological tests.

Courses in medical terminology, typewriting, transcription and medical office management prepare the student to conduct the business and administrative duties. English, social sciences, psychology and medical law are included to provide a general background.

Directed Practice supplements the campus segment of the curriculum as senior students participate in an externship program that requires a working experience in physicians' offices or other health care facilities.

The curriculum is accredited by the Council on Medical Education of the American Medical Association (AMA) and by the American Association of Medical Assistants (AAMA). Graduates are awarded the Associate in Applied Science degree and may elect to take an examination given by the AAMA to become Certified Medical Assistants. This CMA status is recognized throughout the country and can lead to better job opportunities and higher salaries.

Starting salaries of graduates of the program in 1979 ranged from \$10,500 to \$6,500, and fringe benefits often include free medical care including medications.

FIRST YEAR Fall Semester

			Hours per Class	Week Lab	Credits per Semester
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MOA	102	Medical Assisting Science	2	0	2
MOA	112	Standard First Aid and Personal Safety	0	2	1
MRT	105	Medical Terminology	2	0	2
*SEC	101	or 102 Typewriting	2	3	3
			12	7	15

Spring Semester

BIO	132	Human Biology II	3	2	4
MOA	115	Medical Assisting Procedures	3	2	4
MRT	107	Medical Transcription	0	4	2
MRT	115	Medical Terminology	2	0	2
SPK	102	Effective Speaking or	3	0	3
ENG		English Elective			
			11	8	15

SECOND YEAR Fall Semester

BIO	160	Microbiology	2	3	3
MOA	206	Medical Office Management	3	3	4
MOA	208	Medical Law, Ethics and Economics	3	0	3
MOA	211	Medical Assisting Procedures	2	4	4
PSY	110	Psychology	3	0	3
			13	10	17

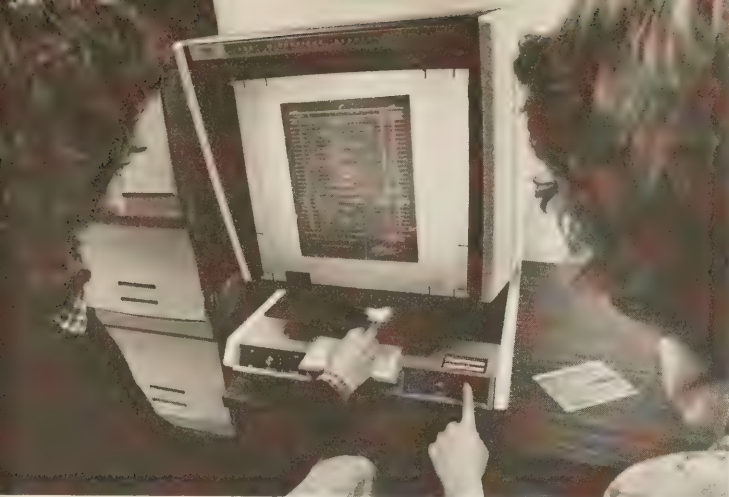
Spring Semester

MOA	201	Medical Assisting Procedures	2	4	4
MOA	245	Directed Practice	1	16	5
MOA	210	Pharmacology	2	0	2
SOC		Social Science Elective	3	0	3
			8	20	14

*Based on placement test



Medical Office Assistant students doing a laboratory analysis in Medical Office Assisting Procedures Class.



Students examining a microfilmed medical record in the College's Medical Records Technology Laboratory.

A medical record is the permanent report of a person's illness or injury kept to preserve information of medical, scientific and legal value. The record includes all medical reports which describe how the patient's illness was diagnosed and treated. Medical records are needed to help doctors diagnose and treat future illness, to verify insurance claims, to plan hospitals, to inform the public health officials, and to aid researchers.

The medical record technician works in the medical record department of a hospital, clinic, nursing home, school of veterinary medicine or other health facility and is responsible for many aspects of preparing, analyzing and preserving health information needed by the patients, by the hospital and by the public. The duties include reviewing medical records for completeness and accuracy and also translating diseases and operations into the proper coding symbols.

Other duties include filing medical records, preparing records for micro-filming, typing reports of operations, X-rays and laboratory examinations, as well as histories, physical examinations and discharge summaries, compiling statistics of many

kinds, assisting the medical staff by preparing special studies and tabulating data from records for research. Supervising the day-to-day operation of a medical record department, taking records to court and maintaining the flow of health information are also parts of the total work picture.

Practice in college medical record laboratory as well as in medical record departments of cooperating hospitals and other health care facilities, either within or outside the area, provides opportunities for additional educational experience which is the vital core of the program.

This curriculum is accredited by the Council on Medical Education of the American Medical Association and by the American Medical Record Association. Students in this program are eligible to take the Medical Record Accreditation Examination following graduation and upon completion receive the title of Accredited Record Technician (ART). Salaries for 1979 graduates ranged from \$13,220 to \$7,000 and averaged \$9,694. Graduates can continue medical record education toward a baccalaureate degree at four-year colleges.

MEDICAL RECORD TECHNOLOGY

DEPARTMENT CHAIRPERSON, Mary Rosato
Business Building, Room 031
Telephone 772-5051

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MRT	101	Medical Record Science	2	2	3
MRT	105	Medical Terminology	2	0	2
*SEC	100	Typewriting	2	2	1
SOC		Social Science Elective	3	0	3
			15	6	16

*This is a five-week course given three times during the semester and must be taken until student reaches 35-words-a-minute proficiency.

Spring Semester

BIO	132	Human Biology II	3	2	4
MRT	107	Medical Transcription	0	4	2
MRT	110	Medical Record Science	2	4	4
MRT	115	Medical Terminology	2	0	2
SPK	102	Effective Speaking	3	0	3
SOC		Social Science Elective	3	0	3
			13	10	18

Summer Term

†MRT	144	Directed Practice ... 40 Hours per week for 4 weeks—4 Credits			
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SECOND YEAR Fall Semester

CST	110	Introduction to Data Processing	3	0	3
MRT	202	Medical Record Science	2	2	3
MRT	208	Advanced Medical Transcription	1	2	2
MRT	222	Medical Legal Aspects	3	0	3
MRT	236	Medical Care Evaluation	2	1	2
			11	5	13

Spring Semester

MRT	210	Medical Record Science	2	2	3
†MRT	245	Directed Practice	0	16	4
MRT	295	Medical Record Seminar	2	0	2
BIO	140	Pathophysiology	3	0	3
MRT	216	Clinical Practicum	0	2	1
			7	20	13

†GRADUATION REQUIREMENT



Nursing student interacting with a young patient in the pediatrics unit of Binghamton General Hospital.

NURSING

DEPARTMENT CHAIRPERSON, Sarah Hannaway
901 Front Street
Telephone 772-5059

Broome Community College offers a two-year, college-based curriculum to prepare graduates for immediate entrance into the first level of registered nursing. Graduates of this curriculum are eligible to take the New York State licensing examination for registered nurses. They are qualified for immediate employment in bedside nursing care, or they may wish to continue their education for the baccalaureate and higher degrees in the nursing field. The 1979 graduates of this program averaged \$11,655 in their starting salaries, which ranged from \$13,600 to \$10,000.

The curriculum operates as a college program, with classes and

laboratories held on the campus. Clinical instruction is in the cooperating hospitals of the Triple Cities. The clinical experiences, which are an integral part of the Nursing curriculum, include caring for individuals in all age groups, as well as observation periods in community health and welfare agencies.

Mature men and women are encouraged to enter this program along with recent high school graduates, whether they are married or single.

This program is accredited by the National League for Nursing.

A grade of C or better is required to pass each nursing course (ADN designers).

FIRST YEAR Fall Semester

			Hours per Class	Week Lab	Credits per Semester
*ADN	100	Meeting Basic Human Needs	5	6	7
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
PSY	110	General Psychology	3	0	3
			14	8	17

Spring Semester

*ADN	101	Nursing Care During the Life Cycle	5	6	7
BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
SOC	110	Introduction to Sociology	3	0	3
			14	8	17

SECOND YEAR Fall Semester

*ADN	203	Immobility Concepts (Half Semester—7½ weeks)	5	9	4
*ADN	204	Regulatory Concepts (Half Semester—7½ weeks)			4
*ADN	205	Psychological Concepts I	1	3	2
ADN	296	Nursing Seminar I	0	2	1
BIO	150	Microbiology I	3	3	4
		Free Elective	3	0	3
			12	17	18

WINTER PRACTICUM

†ADN	298	Nursing Practicum (2 weeks)	0	40	2
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Spring Semester

*ADN	206	I, I and O Concepts (Half Semester—7½ weeks)	5	9	4
*ADN	207	Oxygenation Concepts (Half Semester—7½ weeks)			4
*ADN	208	Psychological Concepts II	1	3	2
ADN	297	Nursing Seminar II	0	2	1
		Free Elective	3	0	3
			9	14	14

*Laboratory experiences for Nursing students may be scheduled during evening hours on their regular laboratory days.

†A clinical practicum of 80 hours to be arranged with a preceptor during the January break.

OFFICE SERVICES ASSISTANT PROGRAM
Leading to Associate in Applied Science Degree
on page 55

GENERAL OFFICE CERTIFICATE PROGRAM
on page 55

RADIOLOGIC TECHNOLOGY (X-RAY)

DEPARTMENT CHAIRPERSON, Nancy Button
Business Building, Room 023
Telephone 772-5070

The radiographer finds employment in hospitals, with doctors who maintain private practices, with government agencies, both civil and military, and in industry. The work of the radiographer consists of making radiographs used in the diagnosis of disease and injury. The radiographer must also be competent in protecting the parts of the body which are not to be exposed to radiation and in operating X-ray equipment and developing film.

The Radiologic Technology program at Broome Community College consists of two academic years on campus and two summers at cooperating hospitals, the equivalent of 24 calendar months. The curriculum is an extremely active one, in which the student is responsible for maintaining academic requirements

on campus as well as fulfilling the practical application of this theory at cooperating hospitals. Students should note carefully the demanding time requirements of this curriculum.

The clinical experience is a viable part of the educational process. Upon completion of 2200 hours of clinical practice as well as the academic requirements of the program, the graduate is eligible to sit for the examination of the American Registry of Radiologic Technologists for certification and licensure. Summer clinical experience is required for graduation.

This program is accredited by the Council on Medical Education of the American Medical Association and starting salaries for graduates of the class of 1979 averaged \$10,504.

Radiologic Technology student making a radiograph of the "phantom" patient, while protected by the lead shielded panel in the College's Radiologic Technology Laboratory.



FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
RAD	100	Introduction to Radiologic Technology			2
		First half-semester	2	0	
		Second half-semester	0	16	
RAD	101	Radiologic Technology I	3	1	3
RAD	103	Positioning I	0	3	1
RAD	110	Methods of Patient Care	1	2	2
			12-10	8-24	15

WINTER TERM I

*RAD 131 Clinical Education I (40 hours per week)

Spring Semester

BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
PHY	117	Physics	2	2	3
RAD	102	Radiologic Technology II	3	0	3
RAD	104	Positioning II	0	3	1
RAD	132	Clinical Education II	0	16	2
			11	23	16

SUMMER TERM I

RAD 133 Clinical Education III 0 40 3

SECOND YEAR Fall Semester

PSY	110	General Psychology	3	0	3
RAD	203	Positioning III	0	3	1
RAD	210	Radiologic Physics	4	0	4
RAD	220	Radiologic Pathology	2	0	2
RAD	230	Clinical Education IV	0	16	2
		Elective	3	0	3
			12	19	15

WINTER TERM II

*RAD 231 Clinical Education V (40 hours per week)

Spring Semester

RAD	216	Imaging Modalities	1	0	1
RAD	225	Special Radiographic Procedures	3	2	4
RAD	232	Clinical Education VI	0	16	2
RAD	245	Radiobiology	2	0	2
RAD	250	Image Assessment	2	1	2
RAD	295	Seminar in Radiography	2	0	2
			10	19	13

SUMMER TERM II

RAD 233 Clinical Education VII 0 40 3

*Successful achievement is a **GRADUATION REQUIREMENT**

SECRETARIAL SCIENCES

DEPARTMENT CHAIRPERSON, Appointment Pending
Business Building, Room 108
Telephone 772-5137

Broome Community College offers three options of study in Secretarial Sciences—Engineering Secretary, Executive Secretary, and Office Services Assistant. The department also offers a one-year certificate in General Office. Graduates of the options usually obtain immediate employment as stenographers, secretaries or office assistants. Graduates a year ago averaged \$8,842 as starting salaries, which ranged from \$11,000 to \$5,821.

Engineering Secretarial students study engineering terminology to understand the specialized language of the engineer, and they are well prepared to work on engineering

reports, records and correspondence.

Executive Secretarial students study terminology in such fields as law, education, insurance, real estate and investments so that they can understand the specialized language used in the professions, as well as in government and business firms.

Office Services Assistant students study a variety of courses including accounting, typing, office management and personnel management. The graduates of the Office Services Assistant option should find employment in word processing centers and other areas of office service work.



A secretarial student entering information on the cathode ray tube text-editing screen. In the College's Model Office/Word Processing Center.

ENGINEERING (INDUSTRIAL) SECRETARY OPTION

FIRST YEAR Fall Semester

			Hours per Week		Credits
			Class	Lab	per Semester
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
ENG	110	Written Expression I	3	0	3
*SEC	101	or 102 Typewriting	2	3	3
†SEC	110	Shorthand or Alternate	2-3	3-0	3
			13-14	6-3	15

Spring Semester

ENG	120	Written Expression II	3	0	3
‡SEC		Typewriting	2	3	3
		or Business Elective	(3)	(0)	(3)
SEC	111	Shorthand and Transcription	2	5	4
SPK	100	Basic Speaking	2	0	2
		Science Elective	2-3	2-0	3
			11-13	10-8	15

*Test will determine which course

†Based on student's record

‡SEC 102 or SEC 104 Typewriting must be completed

SECOND YEAR Fall Semester

			Hours per Week		Credits
			Class	Lab	per Semester
MET	129	Survey of Engineering Laboratories	2	2	3
SEC	151	Business Communications	3	0	3
SEC	230	Advanced Shorthand	2	3	3
SEC	240	Office Practice	0	4	2
		Social Science Elective	3	0	3
		Liberal Arts Elective	3	0	3
			13	9	17

Spring Semester

SEC	212	Technical Typewriting	2	2	3
SEC	234	Specialized Dictation: Engineering	2	3	3
SEC	242	Secretarial Procedures	3	1	3
		Business Elective	3	0	3
		Social Science Elective	3	0	3
SEC	260	Model Office	0	4	2
			13	10	17

EXECUTIVE SECRETARY OPTION

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I		4	0	4
BUS 112	Business Mathematics		2	0	2
ENG 110	Written Expression I		3	0	3
*SEC 101	or 102 Typewriting		2	3	3
†SEC 110	Shorthand or Alternate		2-3	3-0	3
			13-14	6-3	15

Spring Semester

ENG 120	Written Expression II		3	0	3
‡SEC	Typewriting		2	3	3
	or Business Elective		(3)	(0)	(3)
SEC 111	Shorthand and Transcription		2	5	4
SPK 100	Basic Speaking		2	0	2
	Science Elective		2-3	2-0	3
			11-13	10-8	15

*Test will determine which course

†Based on student's record

‡SEC 102 or SEC 104 Typewriting must be completed

SECOND YEAR Fall Semester

BUS 118	Business Law I		3	0	3
ECO 110	Introduction to Micro-Economics		3	0	3
SEC 151	Business Communications		3	0	3
SEC 230	Advanced Shorthand		2	3	3
SEC 240	Office Practice		0	4	2
SEC 260	Model Office		0	4	2
			11	11	16

Spring Semester

ECO 111	Introduction to Macro-Economics		3	0	3
SEC 210	Executive Typewriting		2	2	3
SEC 232	Specialized Dictation: Executive		2	3	3
SEC 242	Secretarial Procedures		3	1	3
	Free Elective		3	0	3
	Liberal Arts Elective		3	0	3
			16	6	18

OFFICE SERVICES ASSISTANT OPTION

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I		4	0	4
BUS 112	Business Mathematics		2	0	2
*SEC 101	or 102 Typewriting		2	3	3
ENG 110	Written Expression I		3	0	3
	Liberal Arts Elective		3	0	3
			14	3	15

Spring Semester

BUS 101	Accounting II		4	0	4
†SEC 102	Typewriting		2	3	3
	or Business Elective		(3)	(0)	(3)
ENG 120	Written Expression II		3	0	3
SEC 151	Business Communications		3	0	3
	Science Elective		2-3	0-2	3
			14-16	0-5	16

SECOND YEAR Fall Semester

BUS 118	Business Law I		3	0	3
ECO 110	Introduction to Micro-Economics		3	0	3
CST 110	Introduction to Data Processing		3	0	3
SPK 100	Basic Speaking		2	0	2
SEC 244	Office Practice/Procedures		2	3	3
	Liberal Arts Elective		3	0	3
			16	3	17

Spring Semester

BUS 261	Office Management		2	0	2
BUS 249	Principles of Personnel Management		3	0	3
ECO 111	Introduction to Macro-Economics		3	0	3
	Business Elective		3	0	3
SEC 260	Model Office		0	4	2
	Liberal Arts Elective		3	0	3
			14	4	16

*Test will determine which course

†SEC 102 or SEC 104 Typewriting must be completed

GENERAL OFFICE CERTIFICATE PROGRAM

Fall Semester

	Credits
*SEC 101 or 102 Typewriting	3
BUS 110 Introduction to Business	3
ENG 100 Basic Language Skills	
or	3
ENG 110 Written Expression I	
Elect 1 of the following	3
PSY 100 Psychology of Personal Adjustment	
PSY 110 General Psychology	
SAC 101 The Individual in a Changing Environment	
SAC 295 Seminar in Human Potential	
BUS Business Elective	3-4
	15-16

Spring Semester

	Credits
†SEC 102 Typewriting	
or	3
BUS Business Elective	
SEC 151 Business Communications	3
SEC 246 Office Machines	3
SEC 248 Office Procedures	3
BUS Business Elective	3-4
	15-16

*A test will determine which course

†SEC 102 or SEC 104 Typewriting must be completed

This one-year certificate program is designed to equip individuals with entry-level skills for placement with various business firms. Students can choose elective courses in the accounting, marketing or secretarial field to enable them to give a particular emphasis to their studies. No high school diploma is required. This program is offered by the Secretarial Sciences Department.

Such courses as Office Machines, Business Communications and Office Procedures are included, along with classes in Written Expression, Psychology and Typewriting.

Evening Part-Time Studies

(Continuing Education)

MEETING MANY NEEDS

People often think that higher education is available only for recent high school graduates. Broome Community College tries to reach out and meet the educational needs of ALL the people in Broome County. "Community" is part of the College's name and a large portion of its mission. BCC is concerned about meeting the needs of the part-time student, as well as those enrolled full time.

Anyone in the community may enroll as a part-time student, and BCC attracts a large number each year. The fall 1979 part-time enrollment, for example, was more than 2,600 men and women, most of them for evening classes as they are largely adults who work during the day. In recent years the College has also increased its enrollment of part-time day students, and the total was more than 600 last fall.

PART-TIME STUDENTS

. . . are those who take fewer than 12 credits per semester, usually one or two courses. At BCC, part-time students can:

- Enroll in credit or non-credit mini courses.
- Take day courses, evening classes or both.
- Attend classes in the fall, spring or summer semester.
- Earn a degree or not, as they see fit. Certificate and diploma programs are also available.
- Apply for financial aid—if carrying more than 6 credits.
- Receive academic advice and personal counseling.
- Find other students over 21.
- Borrow books from the College Library.
- Carry one, two or three courses.
- Belong to the Evening Student Association.
- Receive Veterans' benefits.
- Transfer credits to BCC earned at another college.

Many firms have a tuition-reimbursement plan that pays all or part of an employee's tuition and costs if his/her courses are job-related.

The College conducts a special Information Session for new part-time students at the beginning of the fall and spring semesters to inform prospective students what programs are available, how to register, how to get started at BCC, and to answer their many questions.

The BCC Office of Continuing Education caters to the needs of part-time students.

BCC can design special courses for industry or community organizations or offer courses at off-campus sites—in their plant or the community.

For details on these programs, contact the Office of Continuing Education (Wales Building, Room 108 or call 772-5012).

ENROLLMENT

First-Time Enrollment

Those enrolling as part-time students for the first time at Broome Community College should be aware of the following services available to them:

- Information Sessions
- Registration
- Financial Aid
- Veterans Benefits

THE INFORMATION SESSIONS are conducted prior to each term. At this time, one can learn about the College and its programs, how to register, how to schedule courses, and how to get answers to questions.

REGISTRATION IS REQUIRED. First-time students must register, in person or by mail, and they must pay their tuition at the time they register in person or when billed if registering by mail. Registration for the fall 1980 semester is August 25 and 26 and for the spring 1981 semester it is January 12 and 13.

FINANCIAL AID is available to part-time students who take 6 or more credits. Many companies have tuition reimbursement plans, and employees should familiarize themselves with their companies' policy. The College has a Financial Aid Office in the Wales Building, Room 101 (phone 772-5028) to answer questions about this. If one's company is paying, a letter to that effect should be brought to registration.

RESIDENCY REQUIREMENTS. See page 11.

Continued Enrollment

Those who are continuing their studies at the College as part-time students should always keep in close touch with their academic advisors and follow the three-step approach shown on pages 59 to 67 for their program of study, so that they do not overlook any courses they should take.

They also are eligible for the financial aid and veterans benefits of first-time, part-time students (see above), and they have to comply with the same residency requirements. They must also register, either by mail or in person. Tuition must be paid at the time of registration, if in person, or when billed if registering by mail.

CREDIT FOR PRIOR LEARNING

Transfer Credits

- Courses completed at another college prior to enrolling at Broome Community College will be considered for transfer credits. The student, however, must initiate the request for this consideration.
- An official transcript must be on file in the Registrar's Office for all students—part-time or full—prior to transcript review for transfer purposes.

Credit for Prior Non-Academic Experience

Credit may be given for life experiences or previous employment accomplishments. A number of methods exist for receiving this credit, and details are available from the Dean of Curriculum (Room 202, Wales Building, Phone 772-5161).

Students may also find it advantageous to request credit by examination for a course in whose field they have previous experience. They can do this by taking a special examination. If they pass this test, they can receive "Credit by Examination" for the course and will not have to take it, thus saving the cost of tuition and the semester(s) involved. Taking this examination for credit requires payment of a \$25 fee for a non-laboratory course. If the course has a laboratory, an additional fee of \$10 per hour will be charged for the laboratory portion of the exam. There will be a maximum charge of \$65, which includes the original \$25.

ADMISSIONS AND GRADUATION

The All-Purpose Reminder is used by the Office of Continuing Education for several procedures, one of which is admissions. Students wishing to be admitted to part-time evening degree programs should fill out an All-Purpose Reminder in Room 108 of the Wales Building. Upon acceptance, the student will receive a formal letter of admission from the Dean of Continuing Education.

Another important use of the All-Purpose Reminder is to trigger paperwork on certificate, diploma and degree candidacy. All awards at Broome Community College are conferred in May. Evening students who expect to complete course requirements in May must declare their candidacy by filing an All-Purpose Reminder in Wales-108 *prior to February 1* of that year. This will initiate an official review of the records and a formal letter of candidacy from the Dean of Continuing Education. The Registrar's Office will also be notified and it will send out information in April pertaining to the awards ceremonies.

EVENING STUDENT ACADEMIC ADVISEMENT

There are three academic advisers available during evening hours to accommodate the evening student population here at Broome Community College:

Douglas Garnar	772-5163 or 772-5054
David Kenien	772-5054 or 772-5012
Margaret Pimpinella	772-5055 or 772-5012

Students who are nearing the completion of their certificate, diploma or degree requirements or those who need to know the requirements for any degree program offered in the evening, should consult one of the above academic advisers. Each adviser is prepared to handle questions concerning any degree program. There will be two advisers available from Monday through Thursday evening in Wales-108. No appointment is necessary.

SPECIAL OFFERINGS FOR PART-TIME STUDENTS

Mini-Courses

These are non-credit courses, usually three or six weeks in length, running one evening per week. They cover a wide range of topics that may be employment related, directed toward hobbies or just subjects of general interest, and they have no homework, no exams and no grades. The College publishes printed bulletins each fall and early spring with a full listing of offerings. These mini courses have attracted more than 4,000 students a year in recent years.

Workshops and Seminars

The College conducts workshops and seminars in a variety of topics throughout the year. These are intended to update job skills and explore new fields of interest. Some of the seminars have been for senior citizens, for law-enforcement personnel, for women seeking jobs and educational information, for volunteer firemen, for community agencies, and for business and industry.

Weekend Courses

These may be offered on Friday and Saturday, and they have the advantage of giving one a whole week to do the homework. They are usually credit courses. The number of offerings is increasing as student interest increases.

TV Credit Courses

One's TV set at home is the classroom, as the class work is shown on home TV channels. The College assigns an instructor to answer students' questions and give and grade examinations. Home work and tests can be mailed to the instructor. The TV class work is once a week, with full morning devoted to telecourses on Saturdays.

Courses by Newspaper

One course is given each semester, with some of the class work being published in one of the local weekly newspapers. Contact with the college instructor can be made in person or by telephone, and home work and examinations are mailed in. These are credit courses.

Study Abroad

The College belongs to a consortium for international study, which offers credit courses in many countries, including England, Israel, Denmark and Canada. These courses can be for two weeks, for a whole semester or for an entire year. See pages 16 and 17 for details.

Summer Session

Courses conducted during the summer present an opportunity for residents of Broome County to make up for past academic difficulties, lighten future study loads, or just take courses. One does not have to be a full-time BCC student to enroll, and both credit and non-credit courses are offered in the day and evening. The credit courses have been accepted for college credit at many colleges and universities across the country. Non-credit mini courses are given too. Special flyers are available free in the Office of Continuing Education.

Courses for Government Employees

The College participates in two programs for government employees—Employee Benefits Training Courses for New York State employees and the Local Government Training Institute for county, city and village employees. Courses are given for either credit or no credit, depending on specific training needs.

Special Need Courses

Many groups come to the College's Office of Continuing Education with needs for particular courses such as offerings for real estate salesmen and brokers, professional engineers, nurses, tool and die makers, insurance agents. These groups may need courses for upgrading skills, professional licensure or continuing education requirements. All such requests are welcome, and efforts will be made to design special courses with existing college faculty or qualified personnel from off campus.



EVENING STUDENT ASSOCIATION

The Evening Student Association (ESA) provides the evening students with a means of planning, organizing and operating activities and organizations for the part-time student. It provides a basis for discussion and action on academic, cultural and social matters and affords evening students an opportunity to express their views on significant issues. The ESA has ready access to the administration and campus community through the Office of Continuing Education and its staff advisor.

All evening students may be participating members and the ESA is a member of the United States Association of Evening Students and the Upstate New York Region. For more information, contact the Office of Continuing Education, Wales Building, Room 108.



DISPLAY OF CREDIT PROGRAMS

Following are displays of courses for the programs that the College offers to part-time students. Most of these are given in the evening, although some are day offerings. Students who pursue these programs should meet with their academic advisors or program coordinators to determine the best approach to meeting their individual needs.

Three distinct achievement levels are displayed. **Step 1** consists of the courses required for acceptance as a degree or a diploma candidate; **Step 2** continues and adds courses required for one to earn a diploma, which is essentially one year of college level work; **Step 3** contains the additional courses required for one to earn his/her associate degree.

Those interested in earning a degree should enroll in courses required for acceptance as a degree or diploma candidate (Step 1). Then after completing those courses, he/she should follow the prescribed sequence by taking the courses in Step 2 and then Step 3. One should always consult with the advisor, too, as sometimes special course consideration is possible.

ACCOUNTING EMPHASIS In Business (Associate in Applied Science Degree)

STEP 1—Courses required for Acceptance as Degree Candidate

	Credits
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Business Mathematics	2
BUS 118 Business Law I	3
ENG 110 Written Expression I	
or ENG 100 Basic Language Skills	3
Apply for Acceptance as Degree Candidate	16

STEP II—Diploma Requirements

(Acceptance requirements—above)	16)
BUS 157 Report Writing	3
Liberal Arts Elective	3
Accounting Courses	10
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above)	32)
Accounting Courses	8
Business Related Courses*	8
Social Sciences	6
English Elective	3
BUS 221 Math for Business Analysis	2
or BUS 115 Business Statistics	3
PHS 111 Physical Science for Today	3
Electives (any field)	2-3
AAS Business (Accounting Emphasis)	
Minimum Semester Credits	65

*Business related courses from BUS, CST, MAT, MET or SEC course numbers as approved by the Academic Advisor for Business (See course descriptions on pages 68 to 113.)

Students who have taken courses through AIB, LOMA, or other recognized national programs of study and examination should apply to the Academic Advisor for individual consideration of credit.

AUTOMOTIVE SERVICE SPECIALIST (Associate in Applied Science)

This program was awaiting final approval when this catalog was printed, and it is expected to be operating as an official degree program in the fall of 1980.

CHEMICAL EMPHASIS In Industrial Technology (Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
CHM 145 Chemistry	4
English Electives (see list below)	3
Apply for Acceptance as a Degree Candidate	11

STEP II—Diploma Requirements

(Acceptance requirements—above)	11)
CHM 146 Chemistry	4
CHM 291 Organic Chemistry I	3
CHM 292 Organic Chemistry II	3
PHY 141 Physics	4
MAT 140 Trigonometry	4
CST 122 Computer Programming— FORTRAN (Technical)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above)	32)
PHY 142 Physics	4
CHM 293 Analytical—Instrumental Chemistry I	3
CHM 294 Analytical—Instrumental Chemistry II	3
English Electives (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Science Electives (see list below)	13
AAS Industrial Technology (Chemical Emphasis)	
Minimum Semester Credits	64

The following may be taken as approved technical/science courses to meet degree requirements: CHM 296, CHM 297, CHM 298, MAT 142, MAT 241, CST 130, EET 111, EET 112, EET 125, EET 126, CIV 260, MET 245, MET 261, BIO 111, BIO 112

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 110, ECO 111, PSY 110, SOC 110, SOS 130

CHILD CARE (Associate in Applied Science Degree)

It is recommended that courses be taken in the following sequence:

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
PSY 110 General Psychology	3
PSY 211 Child Development	3
CDC 100 Introduction to the Education of Young Children	3
ENG 110 Written Expression I	3
CDC 120 Curriculum Development	3
Apply for Acceptance as Degree Candidate	15

STEP II—Diploma Requirements

(Acceptance requirements—above)	15)
SOC 110 Introduction to Sociology	3
CDC 170 Practicum I	3
CDC 200 Social Psychology of Education	3
Child Care Electives (see list at right)	6
Apply for Diploma	30

More Information:

Francis J. Short, Chairman, 772-5087
Marilyn Schafer, Program Coordinator, messages 772-5083 or 772-5094

STEP III—Degree Requirements

(Diploma requirements—at left)	30)
English/Literature	3
Humanities Elective (see list below)	3
Math or Science Elective (see list below)	6-8
Child Care Electives (see list below)	6
CDC 290 Practicum II	6
Related Approved Electives (see list below)	6
AAS Child Care Minimum Semester Credits	60-62

CDC Electives:

Students may select 12 hours of courses designated for Child Care, such as CDC 115, CDC 140, CDC 150, CDC 160, CDC 210, CDC 220, CDC 230, CDC 250, LIT 263

Related Electives:

Students may elect 6 hours from the Related Approved Electives from the following: PSY 212, PSY 214, PSY 217, PSY 220, PSY 227, SOC 230, SOC 210, SOC 234, or from other disciplines with permission.

Elective Areas:

Suggested Humanities—select from English, Languages, Fine Arts, Philosophy, Speech (SPK 102 recommended)

Math or Science—select from Math, Biology, Chemistry, Physics, Physical Science (MAT 111, BIO 131, CHM 120 recommended)

CIVIL EMPHASIS In Industrial Technology (Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate or equivalent as approved by the department

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
English Elective (see list below)	3
PHY 141 Physics	4
Apply for Acceptance as Degree Candidate	15

STEP II—Diploma Requirements

(Acceptance requirements—above)	15)
MET 132 Mechanics	4
CIV 155 Surveying	3
CIV 156 Route Surveying	4
CIV 159 Architectural Drafting I	3
CIV 228 Estimating and Construction Planning	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above)	32)
PHY 142 Physics	4
MET 235 Strength of Materials	3
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Electives (see list below)	16
AAS Industrial Technology (Civil Emphasis)	
Minimum Semester Credits	64

The following may be taken as approved technical elective courses to meet degree requirements:

CIV 160, CIV 161, CIV 163, CIV 251, CIV 252, CIV 255, CIV 257, CIV 260, CIV 262, CIV 264, CIV 266, CIV 268, CST 122, MAT 142, MAT 241, EET 111, EET 112

Suggested English Courses:

ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:

ECO 110, ECO 111, ECO 104, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130



COMPUTER OFFERINGS

COMPUTER EMPHASIS In Industrial Technology (Associate in Applied Science)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
ENG 110 Written Expression I	3
MAT 139 Algebra	4
CST 110 Intro. to Data Processing or CST 111 Intro. to Computer Studies	3
CST 115 Problem Solving with Pascal	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above)	13)
CST 122 FORTRAN (Technical)	3
CST 112 Computer Logic	3
MAT 140 Trigonometry	3
2 Computer Electives	6
MAT 121 Finite Math or MAT 153 Discrete Math I	3-4
Apply for Diploma	31-32

STEP III—Degree Requirements

(Diploma requirements—above)	31-32)
CST 200 Systems Analysis	3
CST 220 Microprocessors	3
Lab Science Sequence	8
English Elective	3
Social Science Electives	6
3 Approved Electives	9
AAS Computer Emphasis Semester Credits	63-64

DATA PROCESSING (Associate in Applied Science)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
BUS 100 Accounting I	4
CST 111 Introduction to Computer Studies	3
CST 115 Problem Solving with Pascal	3
ENG 110 Written Expression I	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above)	13)
BUS 101 Accounting II	4
BUS 115 Business Statistics or MAT 114 Statistics	3
CST 100 BASIC	1
CST 118 COBOL	3
ENG 120 Written Expression II	3
MAT 121 Finite Math	3
SPK 100 Basic Speaking or SPK 102 Effective Speaking	2-3
Apply for Diploma	32-33

STEP III—Degree Requirements

(Diploma requirements—above)	32-33)
BUS 157 Business Report Writing	3
CST 116 RPG II	3
CST 218 Advanced COBOL	3
PHS 111 Physical Science for Today	3
2 Social Science Electives	6
BUS 270 Decision Making	3
CST 120 FORTRAN (Business) or CST 122 FORTRAN (Technical)	3
CST 200 Systems Analysis	3
CST 217 Advanced RPG II	3
AAS Data Processing Semester Credits	62-63

DATA PROCESSING—TECHNICAL (Associate in Applied Science)

STEP I—Acceptance as a Degree Candidate

	Credits
ENG 110 Written Expression I	3
CST 111 Intro. to Computer Studies	3
CST 115 Problem Solving with Pascal	3
MAT 114 Statistics	3
Laboratory Science Sequence	4
Apply for Acceptance as Degree Candidate	16

STEP II—Diploma Requirements

(Acceptance requirements—above)	16)
PHI 202 Logic	3
CST 122 FORTRAN (Technical)	3
ENG 150 Technical Writing	3
MAT 153 Discrete Math I	4
Laboratory Science Sequence	4
Apply for Diploma	33

STEP III—Degree Requirements

(Diploma requirements—above)	33)
CST 112 Computer Logic	3
CST 126 Assembler—BAL	3
CST 205 Advanced FORTRAN with Graphics	3
MAT 154 Discrete Math II	4
2 Social Science Electives	6
CST 202 Data Structures	3
CST 220 Intro. to Microprocessors	3
CST 222 Topics in Computer Systems	3
SPK 102 Effective Speaking	3
AAS Data Processing—Technical Semester Credits	64

COMPUTER SCIENCE
(Associate in Science Degree)
See page 36.

CRIMINAL JUSTICE (Associate in Applied Science)

Most Criminal Justice (CRJ) courses are given in the evening.

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
SOC 110 Introduction to Sociology	3
Criminal Justice Courses	6
Apply for Acceptance as Degree Candidate	12

STEP II—Diploma Requirements

(Acceptance requirements—above)	12)
PSY 110 General Psychology	3
SPK 102 Effective Speaking	3
POS 201 The American Political System or POS 204 American State & Local Government	3
Sociology Elective	3
Psychology Elective	3
Criminal Justice Courses	6
Apply for Diploma	33

STEP III—Degree Requirements

(Diploma requirements—above)	33)
Lab Science or Math or Combination	6
Philosophy Elective	3
Free Electives (any field: POS recommended)	6
Criminal Justice Courses	12
AAS Criminal Justice Minimum Semester Credits	60

More Information:

Francis J. Short, Chairman, 772-5087
William Michalek, Program Coordinator, messages, 772-5082

DIETETIC ASSISTANT (Leads to Certificate)

This program is designed for individuals already employed in the food service field, as there is a requirement for supervised work experience by a Registered Dietician. All persons entering the program are responsible for finding a preceptor, and registrations are on a pre-application basis.

	Credits
DIA 101 Nutrition	3
DIA 102 Institution Food Preparation	3
DIA 201 Food Management Systems	3
DIA 202 Personnel Management	3
Apply for Certificate—Dietetic Assistant	12

More Information:

Francis J. Short, Chairman, 772-5087
Lorraine Gula, Program Coordinator, messages, 772-5012 or 772-5087

ELECTRICAL EMPHASIS In Industrial Technology (Associate in Applied Science)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
EET 125 Circuits I	3
ENG 110 Written Expression I	3
Apply for Acceptance as Degree Candidate	14

STEP II—Diploma Requirements

Acceptance requirements—above	14)
EET 126 Circuits II	3
EET 255 Electronics I	4
MET 113 Engineering Drawing	2
CST 122 Computer Programming—FORTRAN (Technical)	3
Social Science Elective (see list below)	3
Approved Technical Electives (see list below)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above)	32)
EET 235 Electrical and Electronics Drawing	2
EET 256 Electronics II	4
EET 257 Electronics III	4
EET 267 Digital Electronics & Microprocessors	4
PHY 141 & PHY 142 Physics	8
ENG 150 Technical Writing	3
Social Science Elective (see list below)	3
AAS Industrial Technology (Electrical Emphasis) Minimum Semester Credits	64

Anyone starting the Electronic sequence will be required to take EET 267

Approved Technical Electives:

EET 111, EET 112, EET 268, MAT 114, MAT 241, MAT 243, MAT 246, MET 245, MET 132, MET 247, MET 255, MET 261, MET 280, MET 285, MET 286, MET 287, CIV 228, CIV 268, CIV 155, CHM 145, CHM 146, CST 126, CST 130, CST 200, CST 202, CST 204, CST 205

Suggested Social Science Courses:

ECO 104, ECO 110, ECO 111, PSY 100, PSY 110, SOC 110, SOS 130

Courses in the fast changing engineering technologies such as Electronics, Design & Fabrication, Computers and Machine & Controls, can not be used for degree requirements if they were taken more than 5 years prior to graduation date. One exception to this rule would be the student who has been in the degree program for a number of years and has taken at least one required course every fall and spring semester.



FIRE PROTECTION TECHNOLOGY (Associate in Applied Science Degree)

The Fire Protection Technology Program is designed to provide fire fighters and related fire service personnel with specialized training. The curriculum has been developed by a local advisory committee to meet the needs of the area, and specialized courses as well as general education courses constitute the degree program. Specialized courses include Fire Fighter Tactics and Strategy, Arson Investigation, Hydraulics, Hazardous Materials, Fire Prevention, and Building Construction.

This program is open to both paid and volunteer fire fighters of the community, as well as those persons in related firematic areas.

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
ENG 110 Written Expression I	3
Fire Protection Courses	9
Apply for Acceptance as Degree Candidate	12

STEP II—Diploma Requirements

(Acceptance requirements—above	12)
SPK 102 Effective Speaking	3
Mathematics or Science Elective (see below)	3
Chemistry (see below)	3
Social Sciences (see below)	3
Fire Protection Courses	6
Apply for Diploma	30

STEP III—Degree Requirements

(Diploma requirement—above	30)
Fire Protection Courses	6
Social Sciences (see below)	3
Health (see below)	3
Management	6
Electives (see below)	12
AAS Fire Protection Technology	
Minimum Semester Credits	60

Chemistry: Suggest CHM 120

Mathematics: Suggest MAT 139 (4 Credits)

Social Sciences: Choose from History, Anthropology, Sociology, Psychology, Political Science, Economics
Health: Advanced First Aid Emergency Medical Technician Programs or equivalent may be submitted for approval

Fire Protection Courses: Select from FRS 101, FRS 103, FRS 105, FRS 108, FRS 200, FRS 201

Electives: Courses with FRS, SAF, MAT designators or other courses with permission

More Information:

Francis J. Short, Chairman, 772-5087

Ogden J. Clark, Program Coordinator, messages 772-5012

INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE OPTION

In Industrial Technology (Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
CHM 120 Fundamentals of Chemistry	3
ENG 110 Written Expression I	3
MAT 139 Algebra	4
SAF 100 OSHA Codes and Regulations	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above	13)
Social Science Elective	3
MAT 124 Statistics	3
BIO 131 Human Biology	4
SAF 120 Introduction to Industrial Hygiene	3
SAF Industrial Safety Courses	6
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
Social Science Electives	3
ENG 150 Technical Writing or	
SPK 102 Effective Speaking	3
SAF Industrial Safety Courses*	9
Technical Electives†	8
Business Electives‡	7
AAS Industrial Technology	
Industrial Safety and Occupational Hygiene Option Minimum Semester Credits	62

*Industrial Safety courses—SAF 100 OSHA Codes and Regulations, SAF 101 Accident Investigation and Prevention, SAF 102 Design and Evaluation of Safety Program, SAF 105 Material Handling and Storage of Common and Special Products, SAF 110 Ventilation and Exhaust, SAF 111 Machine Guarding, SAF 120 Introduction to Industrial Hygiene, SAF 130 Product Safety, SAF 250 Special Topics (1 to 3 credits), FRS 101 Fire Prevention and Protection, FRS 200 Hazardous Materials (All are 3 credits, except where marked otherwise.)

†Technical electives—MET 287 Plant Layout and Material Handling (2 credits), FRS 108 Building Construction (3 credits). Others by permission.

‡Business electives—BUS 118 Business Law (3 credits), BUS 150 Personnel Administration (2 credits), BUS 207 Managerial Accounting I (2 credits), BUS 252 Supervision of Personnel (2 credits). Others by permission.

More Information:

Francis J. Short, Chairman, 772-5087

Donald Pixley, Program Coordinator, Messages, 772-5012 or 772-5087

GENERAL OFFICE (Leads to Certificate) See page 55

This program can be taken as a full-time one-year program or taken as a part-time program either daytime or evening.

INDIVIDUAL STUDIES (Associate in Applied Science or Associate in Science Degrees) See page 41

LIBERAL ARTS & SCIENCES (Associate in Arts Degree)

The Associate in Arts program is structured to allow the greatest flexibility in course selection and sequence. It is strongly recommended beginning the program by first satisfying the English requirement, i.e., 6 hours from ENG 100, ENG 110, or ENG 120.

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
Liberal Arts Courses	6
Apply for Acceptance as Degree Candidate	6

STEP II—Diploma Requirements

(Acceptance requirements—above)	6)
English (Composition)	6
Approved Humanities	3
Approved Social Sciences	6
Approved Liberal Arts Courses	11
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above)	32)
Remainder of degree requirements (see below)	30
AA Liberal Arts & Sciences Minimum Semester Credits	62

Minimum requirements for AA degree:

English—a minimum of 12 credits, of which 6 shall be in composition and 6 in literature
History—a minimum of 6 credits in approved courses including HIS 100 The Rise of the West
Humanities—a minimum of 6 credits (6 in Philosophy or 6 in a foreign language)

Mathematics—students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics • Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics • Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional math. They may, however, elect an appropriate math course or an elective in another field

Natural and Physical Sciences—a minimum of 8 credits
Social Sciences—a minimum of 6 credits
Electives—minimum of 16 credits (A maximum of 15 credits may be taken outside the offerings in Liberal Arts & Sciences with the approval of the Dean of Liberal Arts)
Satisfactory completion of all courses in a curriculum or as approved in a department

LIBERAL ARTS & SCIENCES General Studies Emphasis (Leads to Diploma)

	Credits
English	6
Social Sciences & Humanities	18
Approved Electives	8
Liberal Arts Diploma (General Studies Emphasis)	32

The awarding of this diploma does not necessarily mean the student is a candidate for the Associate in Arts degree. Courses must have approval of the Liberal Arts Division, however, to insure that work is appropriate for the Associate in Arts Degree.

INTERIOR DESIGN (Leads to Certificate)

This is a credit program for individuals interested in a career in interior design or those currently employed in home furnishings or design related fields who would like to obtain greater knowledge and expertise. Those whose interests in design are not job-related are also encouraged to enroll.

Full-time Liberal Arts students are referred to the Interior Design Model for the A.A. degree on page 44.

	Credits
ART 101 Introduction to Art	3
ART 105 Introduction to Design	3
INT 101 History of Architecture— Exterior and Interior	3
*INT 110 Interior Design I	4
*INT 111 Interior Design II	4
INT 120 Construction and Workroom Techniques I	2
INT 121 Specification Writing for Interior Designers	2
INT 130 Rendering	2
INT 140 Fabric Analysis	2
CIV 159 Architectural Drafting I	2
BUS 262 Small Business Management	3

*These courses have prerequisites

More Information:

Robert Keller, Program Coordinator, 772-5095 or 772-5021

LIBERAL ARTS AND SCIENCES Science Option (Associate in Science)

STEP I—Courses required for acceptance as a Degree Candidate

	Credits
ENG 110 Written Expression I	3
ENG 120 Written Expression II	3
Apply for Acceptance as a Degree Candidate	6

STEP II—Diploma Requirements

(Acceptance requirements—above)	6)
2 Science Electives* (Fall)	8
2 Science Electives* (Spring)	8
HIS 100 Rise of the West	3
History Elective	3
2 Social Science Electives†	6
Mathematics or Philosophy or Foreign Language‡	6-8
Apply for Diploma	34-36

STEP III—Degree Requirements

(Diploma requirements—above)	34-36)
2 Science Electives* (Fall)	8
2 Science Electives* (Spring)	8
2 Literature Electives Math or Liberal Arts Electives**	6-8
AS degree in Liberal Arts Semester Credits	62-66

* "Sequences" in biology, chemistry, physics or physical science must be taken for each of these 2 science requirements. (Recommended: BIO 111, 112; CHM 145, 146; PHY 161, 162; CHM 245, 246.)

† Courses to be chosen from ANT, ECO, POS, PSY, SOC, SOS designators.

‡ Students who have not passed Advanced Algebra or its equivalent in high school (usually 3½-4 high school units) should take Algebra and Trigonometry or Pre-Calculus the first year followed by a year of Calculus with Analytic Geometry in the second year. Only if students have the equivalent of Calculus with Analytic Geometry upon entry, can they take the non-math elective.

* "Sequences" in biology, chemistry, physics or physical science to be taken for each of the 2 science requirements. At least 8 hours must be "200" level courses.

** If the Calculus and Analytic Geometry requirement was met the first year, electives **must** be Philosophy (6) or Foreign Language (6-8). Higher level math can only be elected by approval of Dean if transfer needs require it. Humanities requirement would then be waived.



MARKETING MANAGEMENT AND SALES

General Emphasis

(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Business Mathematics	2
BUS 118 Business Law I	3
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
Apply for Acceptance as Degree Candidate	16

STEP II—Diploma Requirements

(Acceptance requirements—above	16)
BUS 157 Report Writing	3
Liberal Arts Elective	3
Business Courses*	10
Apply for Diploma in General Business	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
Business Courses*	8
Business Related Courses†	8
Social Sciences	6
English Elective	3
BUS 115 Business Statistics or BUS 221 Math for Business Analysis	2-3
PHS 111 Physical Science for Today	3
Electives (any field)	2-3

AAS in Marketing Management and Sales
Minimum Semester Credits

63-65

*Business students who have taken courses through AIB, LOMA, or other recognized national programs of study and examination should apply to the Academic Advisor for individual consideration or credit.

†Business related courses from BUS, CST, MAT, MET or SEC course numbers as approved by the Academic Advisor for Business.

Suggested Management Electives: BUS 141, BUS 150, BUS 224, BUS 243, BUS 246, BUS 252, BUS 255, BUS 256, BUS 257, BUS 258, BUS 261, BUS 270, BUS 360, BUS 361, BUS 362.

Suggested Sales Electives: BUS 120, BUS 129, BUS 131, BUS 141, BUS 147, BUS 152, BUS 154, BUS 226, BUS 238, BUS 247.

NOTE: A number of choices exists in The Business—General Emphasis Diploma Program. By carefully selecting the proper Business courses, students can generate a concentration in a particular area, such as Sales, Retailing or Management. To identify these courses, students should discuss their interests with their academic advisor.

The courses completed to earn the diploma are acceptable as credits toward an Associate in Applied Science degree in Marketing Management and Sales.

APPLIED MATHEMATICS EMPHASIS In Industrial Technology (Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
English Elective (see list below)	3
Apply for Acceptance as a Degree Candidate	11

STEP II—Diploma Requirements

(Acceptance requirements—above	11)
MAT 142 Applied Calculus I	4
MAT 241 Applied Calculus II	3
PHY 141 Physics	4
PHY 142 Physics	4
MAT 124 Statistics	3
Approved Elective (see list below)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above	32)
MAT 243 Differential Equations	4
MAT 246 Applied Linear Algebra	4
CST 122 Computer Programming— FORTRAN (Technical)	3
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Electives (see list below)	12
AAS Industrial Technology (Applied Mathematics Emphasis)	
Minimum Semester Credits	64

English Electives:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Social Science Electives:
ECO 104, ECO 110, ECO 111, PSY 100, PSY 110,
SOC 110, SOS 130

Approved Electives:
MAT 244, CST 112, CST 126, CST 130, CST 200,
CST 202, CST 204, CHM 145, CHM 146, CHM 291,
CHM 292, CHM 293, CHM 294, CHM 296, CHM
297, CIV 155, CIV 156, CIV 251, CIV 252, EET 125,
EET 126, EET 255, EET 256, EET 257, EET 258,
MET 113, MET 114, MET 132, MET 235, MET 245

In recent years the demand for higher level mathematics courses has decreased. However, arrangements can be made to allow serious degree candidates to complete their requirements.

MECHANICAL EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
MET 113 Engineering Drawing I	2
English Elective (see list below)	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above)	13)
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
CST 122 Computer Programming— FORTRAN (Technical)	3
MET 132 Applied Mechanics	4
Approved Technical Electives (see list below)	3
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above)	32)
MET 235 Strength of Materials	3
MET 253 Engineering Materials & Industrial Processes	3
MET 261 Engineering Statistics & Quality Control	3
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Electives (see list below)	10
AAS Industrial Technology (Mechanical Emphasis)	
Minimum Semester Credits	64

The following may be taken as approved technical elective courses to meet degree requirements:

MET 114, MET 245, MET 247, MET 249, MET 255, MET 272, MET 280, MET 285, MET 286, MET 287, EET 111, EET 112, EET 125, EET 126, EET 255, EET 256, EET 257, CIV 159, CIV 160, CIV 161, CIV 251, CIV 252, CIV 255, CHM 145, CHM 146, MAT 142, MAT 241

Suggested English Courses:

ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:

ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

MENTAL HEALTH AND RETARDATION EMPHASIS
(Associate in Science Degree)

STEP I—Courses required for acceptance as a Degree Candidate

	Credits
ENG 110 Written Expression I	3
PSY 110 General Psychology	3
MAT Mathematics (Statistics recommended)	3
HIS 100 Rise of the West	3
	12

STEP II—Diploma Requirements

LAB Science (BIO 111 or 131 recommended)	4
ENG 120 Written Expression II	3
SOC 110 Introduction to Sociology	3
PHI 206 Soc./Polit. Philosophy	3
LA Elective	3
PSY 223 Intelligence and Mental Retardation	3
	31

STEP III—Degree Requirements

LAB Science (BIO 112 or 132 recommended)	4
PSY 217 Counseling & Interviewing	3
SOS 288 Seminar in Community Social Service Org.	3
PSY 227 Behavior Modification	3
PSY 214 Abnormal Psychology	3
SOS 290 Social Science Field Work	3
Approved Electives as Mental Health & Retardation Emphasis	12
Minimum Semester Credits	62

More Information:

Rita Hogan, chairperson, Social Sciences, 772-5084

PARALEGAL ASSISTANT
(Associate in Applied Science Degree)

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
ENG 110 Written Expression I	3
PLA 100 Introduction to Paralegal Profession I	3
PLA 101 Introduction to Paralegal Profession II	3
PSY 110 General Psychology	3
Apply for Acceptance as Degree Candidate	12

STEP II—Diploma Requirements

(Acceptance requirements—above)	12)
ENG 120 Written Expression II	3
PLA 102 Introduction to Paralegal Profession III	3
PLA 210 Legal Drafting	3
PLA 200 Real Property Law	3
PLA 205 Techniques of Research	3
PLA Paralegal Elective(s)	3
Apply for Diploma	30

STEP III—Degree Requirements

(Diploma requirements—above)	30)
BUS 100 Accounting I	4
BUS 101 Accounting II	4
Business Elective	3
PLA 215 Estates, Probates & Trusts	3
PLA Paralegal Electives	4
SOC 110 Sociology	3
Math/Science	6
Social Science or Humanities Elective	3
AAS Paralegal Assistant	
Minimum Semester Credits	60

Suggested Math/Science Courses:

MAT 124, MAT 121, BIO 131, CHM 120

Suggested Social Science or Humanities Courses:

PHI 102, SPK 102, Any economics (ECO) course

More Information:

Francis J. Short, Department Chairman, 772-5087
Matthew Vitanza—Program Coordinator, (messages)
772-5012

**PRODUCTION MANAGEMENT EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)**

STEP I—Courses required for Acceptance as Degree Candidate

	Credits
MAT 139 Algebra*	4
MAT 140 Trigonometry*	4
MET 113 Engineering Drawing I	2
English Elective (see list below)	3
Apply for Acceptance as Degree Candidate	13

STEP II—Diploma Requirements

(Acceptance requirements—above)	13)
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
BUS 149 Management & Organization I	2
MET 280 Management Decisions	2
MET 285 Time, Motion & Wage Study	2
Approved Electives (see list below)	4
Apply for Diploma	32

STEP III—Degree Requirements

(Diploma requirements—above)	32)
CST 122 Computer Programming— FORTRAN (Technical)	3
BUS 252 Supervision of Personnel	2
MET 261 Engineering Statistics & Quality Control	3
MET 286 Production Control	2
MET 287 Plant Layout & Materials Handling	2
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Electives (see list below)	7

AAS Industrial Technology (Production Management Emphasis) Minimum Semester Credits 64

*Must have a minimum of 4 hours of Mathematics as a requirement for the degree if background makes it unnecessary to take MAT 139 Algebra and MAT 140 Trigonometry.

The following may be taken as approved elective courses to meet degree requirements:

MET 114, MET 132, MET 235, MET 245, MET 253, MET 255, MET 272, EET 111, EET 112, EET 125, EET 126, CIV 159, CIV 160, CIV 161, BUS 118, BUS 154, BUS 243, BUS 255, MAT 142, MAT 241

Suggested English Courses:

ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:

ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

MINI COURSES (Non-Credit)

- Are designed for leisure learning.
- Usually meet once a week.
- Last from 3 to 8 weeks.
- Begin throughout the year.
- Require no homework, no exams or grades.
- Do not require a special educational background.
- Provide learning without pressure.
- Are designed for those interested in learning more about a subject in an informal setting.

PEOPLE TAKE MINI COURSES TO . . .

- Explore a new subject.
- Try out "going to college."
- Lessen anxiety while taking courses.
- Update occupational skills.
- Improve their quality of life.

Mini courses are given during the fall, spring and summer semesters at Broome Community College, and they cover a wide variety of topics and subjects. These are non-credit courses, usually given one evening a week, and generally for three or six weeks.

One does not have to be a previously or currently enrolled BCC student to take a mini course, and many residents of Broome County have first been introduced to the campus by their enrollment in these courses.

About 200 mini courses are given each year, and they attract about 4,000 students altogether. The following abbreviated list of some recent offerings gives some idea of the type of courses and the range of interests covered:

Refresher Typing	Antique Furniture
Basic Color Photography	Restoration
Fire and Police	How to Play Backgammon
Photography	
Refresher Nursing	Lip Reading
Genealogy	Speed Reading
Parenting	Anatomy of an Auto
Executive Report Writing	Self-Awareness

**GENERAL TECHNICAL STUDIES
In Industrial Technology
(Leads to Diploma)**

	Credits
Technical Courses (in one curriculum)	12
Math & Other Technical Subjects	12
English & Other Liberal Arts Courses	8
Industrial Technology Diploma (General Technical Studies Emphasis)	32

The Industrial Technology Diploma (General Technical Studies Emphasis) offers broader topic coverage during the initial study prior to specialization within an Associate Degree program. A student must have written approval from the Academic Advisor for Technologies.

Contract Courses and In-Service Training

The Office of Continuing Education designs and presents courses and seminars specifically intended to meet the training and educational needs of industry, business and agencies in the area.

The staff is able to tailor the course material and presentations to uniquely fit each client's personnel training needs. This flexibility allows successful growing experiences for the people and institutions involved.

The courses are given on campus or in various other locations including the place of employment. Many topics are addressed, such as management, microprocessors, supervision, pre-retirement education, human services skills, communication skills, personal growth, and more.

More information about these programs is available at the Office of Continuing Education.

Designed for the Adult

Mini courses are designed for adults interested in learning more about a subject in an informal setting. These courses have no requirements, homework, examinations or grades. They do provide a chance to expand one's knowledge in a field, brush up on a skill, explore a new hobby or craft, or assist in one's job—all in a relaxed manner. There are some courses in study skills as well as recreational activities designed for the younger set.

Certificate of Participation

Certificates of Participation are given to those attending 3 out of 3 sessions, 4 out of 4 sessions or 5 out of 6 sessions. Many area employers will reimburse employees receiving a Certificate of Participation for a job-related course.

Easy Registration Procedure

Mini courses are offered continuously throughout the year. Four flyers a year list the courses, with their descriptions, times, dates, fees. A form is included in each term's flyer for easy mail-in registration, or one can register in person at any time. Registrations are accepted on a first-come, first-served basis.

Course Development

The mini courses are a joint effort between Broome Community College faculty, community people, area agencies, organizations and business firms. Groups interested in teaching or co-sponsoring a mini course are encouraged to discuss the possibilities with the College's Office of Continuing Education. Many programs offered each year come about because someone suggested them, or a group was concerned about a real need in the community. A teaching interest and course proposal form is available for individuals wishing to teach a particular subject. These forms will be mailed upon request.

Course Descriptions

All courses listed in this section are scheduled to be offered during the 1980-81 academic year, unless otherwise indicated. The offering of any course, however, is subject to sufficient enrollment. Courses numbered from 100 to 199 are generally first-year courses, and those numbered in the 200's are usually taken in the second year.

BUSINESS COURSES IN ACCOUNTING, BUSINESS ADMINISTRATION AND MARKETING

BUS 100 Accounting I

4 Credits

Basic concepts and procedures in the accounting cycle. Emphasis on journals, ledgers, worksheets and financial statements. Merchandising transactions, special journals, payroll procedures.

4 Class Hours

BUS 101 Accounting II

4 Credits

Continued study of concepts and the special procedures for handling cash, inventories, receivables, payables, deferrals, accruals, plant assets. Accounting for partnerships, corporations and manufacturing concerns.

4 Class Hours

Prerequisite: BUS 100 Accounting I

BUS 102 Payroll Accounting

2 Credits

A comprehensive study of Federal and State laws and regulations affecting payrolls and payroll taxes. Practical report preparation and reporting requirements. Proper accounting practices to record payroll taxes.

2 Class Hours

BUS 110* Introduction to Business

3 Credits

General background of modern business practices through the study of organization and management, production, human resources, accounting and finance, marketing, and the information needed for control and management decisions in business and society.

3 Class Hours

BUS 112 Business Mathematics

2 Credits

Number systems and arithmetic processes. Problems in percentage, simple interest, compound interest, discounting notes, depreciation, insurance, taxes and problems in accounting and marketing.

2 Class Hours

BUS 115 Business Statistics

3 Credits

Concepts and mechanics of measures of central tendency, measures of dispersion, probability and correlation as they relate to general problems in business and economics.

3 Class Hours

Prerequisite: MAT 003 Basic Mathematics Review A or equivalent

BUS 117 Business and Society

3 Credits

The role of business in the contemporary world. Increasingly difficult parameters for business despite the growing demands of accountability from government and of social responsibility from consumers. Business values and ethics, the role of business and government, environmental issues and energy policy, business and labor, business and the consumer, the influence of multi-national corporations.

3 Class Hours

BUS 118 Business Law I

3 Credits

Law as an evolutionary and democratic process. Court structure, administrative law, law-of-contracts, legal principles of agency and partnerships.

3 Class Hours

BUS 120 Business Law II

3 Credits

The law governing the negotiation or transfer of commercial paper and the sale of personal property. The law of personal and real property and sundry topics: bailments, insurance, landlord-tenant relationships, corporate and labor law.

3 Class Hours

Prerequisite: BUS 118 Business Law I

BUS 125* Real Estate Law

5 Credits

For real estate people preparing for the New York State Real Estate Broker's Licensing Examination. Under the supervision of the New York State Department of Licenses. (Credits applicable only to Business program with prior approval from one's academic advisor.)

5 Class Hours

***TAUGHT EVENINGS ONLY**

BUS 129 Consumer Behavior 3 Credits

Emphasizes the development of how people make purchase decisions in the market place. Consumer decision-making, learning, brand loyalty and market segmentation.

3 Class Hours

BUS 131 Personal Finance 3 Credits

Guidelines to everyday financial problems regarding budgeting, installment buying, credit, insurance, taxes, savings, investments and purchasing such long-term investments as a home or automobile.

3 Class Hours

BUS 135* Investments 2 Credits

Application of sound investment principles as they relate to stocks and bonds. Importance of the stock markets, their operation and their place in our society. Current happenings such as over-all market behavior, stock splits, rights and offerings will be studied in various companies, making the subject matter current and relevant to financial events of the day. A model portfolio approach with weekly review by class participants.

2 Class Hours

BUS 138* Income Tax I 1 Credit

Basic Federal income tax rules and regulations for the preparation and filing of personal income tax forms. Personal exemptions, exemptions for dependents, gross income inclusions and exclusions, itemized and standard deductions, tax tables and rates.

1 Class Hour

BUS 139* Income Tax II 1 Credit

Preparation of personal income tax returns involving more complicated items, such as capital gains and losses, rental property, dividends, other income and special deductions.

1 Class Hour

BUS 140* Taxes for Small Business 2 Credits

Basic Federal and State laws, regulations and rules governing the preparation of income tax returns for small businesses with major emphasis on single proprietorships and partnerships.

2 Class Hours

BUS 141 Marketing 3 Credits

The planning and strategy formulation of marketing goods, services, ideas or people, including the principal environmental opportunities and constraints facing the manager of both profit and non-profit organizations. Marketing mix (product, price, place, promotion) and the marketing concept. Lecture, discussion, and cases.

3 Class Hours

BUS 144* Domestic Transportation 2 Credits

Analysis of practices, theories and policies of the transport network. Study of transportation changes—in the locations and movements of goods and people as well as in the physical and institutional organizations (mergers, conglomerates) and their effect on the entire scope of transportation.

2 Class Hours

BUS 147* Retail Buying/Merchandising 3 Credits

The principles of what, when, where and how to buy in order to successfully purchase a stock of merchandise that can be resold at a profit. Analysis of merchandising mix, stock turns, and elements of effective display. Promotional aspects including point of sale, impulse and window displays.

3 Class Hours

BUS 149* Principles of Organization and Management

2 Credits

An introduction to the principles, practices and problems of business organizations. A study of the management process—planning, organizing, staffing, directing and controlling. (Completing this course will not give students credit for BUS 246 Principles of Management).

2 Class Hours

BUS 150* Personnel Administration 2 Credits

Techniques and methods to achieve utilization of manpower in business through proper selection, placement, training, job evaluation, wage setting and employee relations. (Completing this course will not give students credit for BUS 249 Personnel Management).

2 Class Hours

BUS 152 Selling Fundamentals 3 Credits

Principles of sales with practical application. Steps leading to a successful sale—prospecting, planning and delivering, dramatizing, handling objections, closing, building good will. Development and presentation of a complete procedure for a product or service.

3 Class Hours

BUS 154* Purchasing 3 Credits

Analytical approach to techniques employed in the industrial purchasing phase of marketing. Emphasis on the organization of the purchasing functions as an operational unit of the firm directed toward procurement activities.

3 Class Hours

BUS 157 Business Report Writing 3 Credits

Training in logical analysis of business case problems, applied to the preparation of accurate written reports. Methods and skills in formal and informal business writing. Preparation of tables, charts, reference citations and bibliographies. Improvement of basic business writing skill involved in inter-office memos, letters of adjustment, bids, quotations, public relations.

3 Class Hours

BUS 160 Principles of Real Estate 3 Credits

Economic and social impact of real estate. Emphasis on the real estate cycle dealing with the essentials of real property, finance and legal aspects.

3 Class Hours

BUS 162 Real Estate Investments 3 Credits

Approach and basic methodology for analyzing a real estate investment. Emphasis is focused on liquidity, maximum current income, future income, protection from inflation, tax shelter, capital gains and principal protection.

3 Class Hours

BUS 163* Real Estate for Salespersons 4 Credits

Course designed to meet New York State requirements for licensure as a real estate salesperson. Covers land use regulation, law of contracts, real estate instruments, real estate mathematics, real estate finance, closing and closing costs, brokerage and the law of agency, valuation and listing procedures, license law and ethics, human rights and fair housing.

4 Class Hours

***TAUGHT EVENINGS ONLY**

BUS 164* Real Estate for Brokers**4 Credits**

Course designed to meet New York State requirements for licensure as a real estate broker. Covers land use regulation, operation of a real estate broker's office, general business law construction, subdivision and development, leases and agreements, liens and easements, taxes and assessments, investment property, voluntary and involuntary alienation, property management, condominiums and cooperatives, appraisal, advertising, rent regulations.

4 Class Hours**Prerequisite:** BUS 163 Real Estate for Salespersons**BUS 165 Insurance****3 Credits**

Insurance principles and coverage, types of carriers, organizations, history of insurance, analysis of types of coverage available for business and individuals in the casualty and life fields.

3 Class Hours**BUS 166 Property and Casualty Insurance****3 Credits**

Common policy provisions relating to property and casualty insurance and surety. Topics include automobile liability and physical damage, workmen's compensation, general liability, New York Insurance Law, rating and multi-line coverage.

3 Class Hours**BUS 170* Insurance for Agents and Brokers****8 Credits**

Comprehensive survey of insurance. Fire, marine, automobile, owner liability, burglary, boiler, machinery, accident and health, fidelity and surety insurance. Insurance law and duties of the agent.

8 Class Hours**BUS 200 Intermediate Accounting I****4 Credits**

An intensive study of accounting theory and procedures. Emphasis on balance sheet accounts and their interrelationships with income statement accounts. The accounting process and correction of errors. Advanced treatment of cash, receivables, inventories.

4 Class Hours**Prerequisite:** BUS 101 Accounting II**BUS 201 Intermediate Accounting II****4 Credits**

A more advanced treatment of accounting for fixed assets, intangible assets, current and long-term liabilities. Corporation accounting, funds flow reporting, financial statement analysis.

4 Class Hours**Prerequisite:** BUS 200 Intermediate Accounting I**BUS 205 Cost Accounting I****4 Credits**

Nature and purpose of cost accounting. Job order and process costing. Accounting for factory overhead and analysis of variances. Accounting for labor and material.

4 Class Hours**Prerequisite:** BUS 101 Accounting II**BUS 206 Cost Accounting II****4 Credits**

Further consideration of cost accounting principles, standard costs and variances. The construction of budgets, profit planning. Flexible budgets. Direct costing. Break even analysis. Accounting for by-products and joint products. Non-manufacturing costs.

4 Class Hours**Prerequisite:** BUS 205 Cost Accounting I**BUS 207* Managerial Accounting I****2 Credits**

Use of accounting information by management in decision making. Accounting procedures for the evaluation of performance and responsibility accounting in business and industry.

2 Class Hours**BUS 208* Managerial Accounting II****2 Credits**

Relationship of accounting information to such areas of managerial responsibilities as planning and control, cash budgeting and cash flow, relevant cost analysis, profit planning and the effects of price level changes.

2 Class Hours**Prerequisite:** BUS 207 Managerial Accounting I**BUS 220 Financial Information Systems****3 Credits**

Development of practicable accounting systems to provide the information required for effective managerial control. Techniques of flow charting, developing written procedures, analysis of organization structures, form design applied to the basic area of business.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** BUS 101 Accounting II and CST 110 Introduction to Data Processing**BUS 221* Mathematics for Business Analysis****2 Credits**

Basic quantitative mathematical methods for management. Techniques and their application to business problems. Foundation for further study of advanced principles of quantitative analysis.

2 Class Hours**Prerequisite:** BUS 112 Business Mathematics**BUS 224 Business Finance****3 Credits**

Financial principles and procedures. Detailed analysis of forms of business organizations. Single proprietorship, partnerships and corporations together with all financial instruments, surplus, reserves and equities. Application of ratios, rules for budgeting, capitalization, insurance, reorganization.

3 Class Hours**BUS 226* Credit and Collections****3 Credits**

Nature and role of credit, credit management, types of credit, credit department organization, credit reports and investigation, collection procedures, investigation and analysis of mercantile and financial institution credit risks, analysis of financial statements. It is suggested that BUS 100 Accounting I be taken prior to this course.

3 Class Hours**BUS 229 Advertising****4 Credits**

Development, economies, functions of advertising. Cost application, media, testing and research methods. Development of advertisements, copy and layout, methods and problems of reproduction. Planning the advertising campaign with step by step developments. Lectures, discussions, demonstrations. BUS 141 Marketing is recommended as preparation for this course.

4 Class Hours**BUS 238* Marketing Research****3 Credits**

Methods of collecting and interpreting marketing information which affect marketing management. Specific applications to problem identification in market development, gauging market potential and implementation of research designs in the market place. It is suggested that BUS 115 Business Statistics be taken prior to this course.

3 Class Hours***TAUGHT EVENINGS ONLY**

BUS 242 Marketing Seminar **3 Credits**
 Senior capstone course which integrates various business subjects previously studied. Individual and team approach to analysis of comprehensive marketing and management cases and cooperative consideration of alternative decisions to problem solving.
3 Class Hours
Prerequisite: Permission of Chairperson of Business
Department for non-marketing majors

BUS 243* Industrial Management **2 Credits**
 Fundamentals of organization and management of industrial concerns. Emphasis upon leadership, human behavior, analysis in decision making. Examination of problem solving in industrial enterprises and applying management principles. (Completing this course will not give students credit for BUS 246 Principles of Management).
2 Class Hours

BUS 245 Management: A Behavioral Approach **3 Credits**
 A comprehensive analysis of managerial theories and an integration of selected social sciences to investigate organizational problems related to managerial functions. Communications, decision-making, control theory. Impact of the organizational environment upon human behavior.
3 Class Hours

BUS 246* Principles of Management **3 Credits**
 Principles of managerial practices. Planning, organizing, directing, and controlling. Exposes students to proper methods and techniques to achieve employee and job satisfaction. Topics covered include scientific management, behavioral theory, and introduction to management science.
3 Class Hours

BUS 247* Sales Management **3 Credits**
 Development of control techniques in the administration of sales forces. Incentive systems, territory planning, development of sales potentials, personnel problems peculiar to this field.
3 Class Hours

BUS 249 Personnel Management **3 Credits**
 Principles of managerial practices. The four functions of management—planning, organizing, directing and controlling. Designed to expose the student to the proper methods and techniques to achieve employee and job satisfaction. Processing, developing, maintaining and proper utilizing of the labor force. A review of the history and impact of organized labor incorporating economic, political and social pressures which influence employment. Effective interview poise, personal appearance, interviewing techniques, job opportunities and placement services. Correct preparation of a resume and the utilization of references.
3 Class Hours

BUS 252* Supervision of Personnel **2 Credits**
 Concepts and psychology of personnel supervision. Emphasis on the application of management theory through use of case studies and classroom discussions.
2 Class Hours

BUS 255* Industrial Labor Relations **2 Credits**
 Processes of bargaining and contract administration between industrial employers and unions representing employees, as a system of compromising opposing objectives and settling differences. Origins of unions, how they organize and gain recognition and how the labor agreement is negotiated and administered. Interaction among employees, stewards and supervisors. Labor laws. Institutions such as the National Labor Relations Board, mediation services, arbitration boards and courts. (Completing this course will not give students credit for BUS 256 Labor Relations for Business and Industry).
2 Class Hours

BUS 256 Labor Relations for Business and Industry **3 Credits**
 Analysis of labor relations and collective bargaining procedures. Policies of organized labor, employers and government in solving labor-management disputes. Grievance procedure, wage and price policies, arbitration, mediation, negotiations and labor contracts.
3 Class Hours

BUS 257* Organizational Behavior **3 Credits**
 Processes affecting the behavior of individuals and groups are examined with particular attention to their managerial implications. Relevant concepts and research evidence help students to analyze their experiences and generalize from them. Similarities and differences among effective organizational structures and managerial strategies in the public, private and non-profit sectors.
3 Class Hours

BUS 258* Human Relations in Business **2 Credits**
 Basic psychological principles applied to the problems of employee selection, training, evaluation, merit rating and advancement. Social interaction and human relations in industry. Motivation concepts and techniques, job satisfaction, morale, conference leadership and employee and management development.
2 Class Hours

BUS 260* Management of Physical Distribution—Transportation **2 Credits**
 Rates, documentation and career liability (legal implications), factors in routing transportation in the milieu of physical distribution and current issues in the field.
2 Class Hours
Prerequisite: BUS 144 Domestic Transportation

BUS 261* Office Management **2 Credits**
 A comprehensive study of modern management principles and practices in office organization, operation and control. Office layout, personnel, office equipment, processing of information and the planning, flow and measurement of work within the office.
2 Class Hours

BUS 262 Small Business Management **3 Credits**
 Designed for those interested in small business as owner-managers. Development of sound management and modern techniques covering organization, marketing, financing, insurance risk, legal implications, regulations, taxes. (Completing this course will not give students credit for BUS 360, 361, 362).
3 Class Hours

BUS 264 Retailing **3 Credits**
 Fundamentals of purchasing, merchandising, pricing, promotion. Principles of retail management. Coordination of accounting and basic marketing concepts at the market focal point.
3 Class Hours

***TAUGHT EVENINGS ONLY**

BUS 270 Decision Making

An introduction to managerial problems relating to the planning and controlling functions, which provide guidelines to making rational decisions. A realistic approach utilizing cases and simulation will be taken to expose the student to quantitative as well as subjective analysis to point out the constraints placed upon management.

3 Class Hours

Prerequisite: BUS 115 Business Statistics

BUS 295 Accounting Seminar

In-depth treatment of accounting for payroll taxes followed by actual completion of required state and federal tax forms. Thorough coverage of the Individual Tax Form 1040, schedules A, B, C, D, E and G, small business taxes, schedules C, SE, and investment credit. Corporate Tax Form 1120. Accounting concepts and current trends in accounting as reflected through financial statement analysis.

4 Class Hours

BUS 297 Cooperative Work Experience

Cooperative education is available to students in the marketing management, marketing sales and accounting curriculums. On-the-job experience may be obtained in such areas as retailing, banking, fast foods, government services and hotel management, as well as in CPA firms, public accounting offices, industrial, business and government offices where accounting is performed. To be eligible for these opportunities a student should maintain an over-all cumulative grade-point average of 2.5, with a 3.00 average in business courses, and have no F's.

Cooperative work students will meet with the coordinator one hour each week.

BUS 229 Independent Study

The student, under the guidance of a faculty member, undertakes an investigation, study and research in an advanced concept or problem concerning his/her major field of study. Only one independent study course is allowed per semester.

Prerequisite: Approval of Faculty Member and Department Chairperson

BUS 360* Establishing a Small Business

Designed for those who wish to establish their own business as owner-managers. Development of sound management and modern techniques covering talents needed for success. How to select the type of business to enter, to acquire a franchise, and to choose the location.

3 Class Hours (5 weeks)

BUS 361* Operating a Small Business

Designed for those who wish to operate their own business or who are presently operating their own business. Development of sound management and modern techniques covering the production of a product or service, marketing of the business, supplier relations, techniques of management, and the safeguarding of the firm's assets.

3 Class Hours (5 weeks)

BUS 362* Record Keeping in a Small Business

Designed for those interested in small business as owner-managers. An in-depth treatment of fundamentals of the accounting process, evaluating the financial health of the business, regulations and taxes affecting the small business and using the computer in operating the small business.

3 Class Hours (5 weeks)

3 Credits**4 Credits****1-3 Credits****1-4 Credits****1 Credit****1 Credit****1 Credit**

***TAUGHT EVENINGS ONLY**

ANTHROPOLOGY**ANT 110 Physical Anthropology and Archeology****3-4 Credits**

Introduction to human evolutionary history and present day variation examining genetics, ecology, fossils and the primate order. Relationships of physical evolution to early cultural developments as revealed by the archeological record. A limited number of students may select an optional laboratory session giving practice in various technical procedures used in physical anthropology and archeology.

3 Class Hours

ANT 111 Cultural Anthropology**3 Credits**

Comparison of various Western and non-Western societies and cultures. Anthropological theory, linguistics, problems of modernization of traditional societies.

3 Class Hours

ANT 299 Independent Study**1-3 Credits**

An individual student project in anthropology which is beyond the scope of requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

Prerequisite: 3 semester hours in Anthropology

ART**ART 101 Fine Arts: Introduction to Art****3 Credits**

Basic art principles and concepts together with their historical development as shown in representative works of painting, sculpture and architecture. Gallery visits.

3 Class Hours

ART 105 Introduction to Design**3 Credits**

Investigation of visual perception and organization. Through experimentation with a variety of media, use of visuals, lecture, discussion and text, the student is expected to gain heightened sensory awareness of the design elements, establishing the fundamental perceptual skills needed in working with the concept of design.

3 Class Hours

ART 115 Drawing**3 Credits**

Intensive drawing instruction in charcoal, pencil, pen and ink, pastel and mixed media, life drawing, still-life composition.

6 Studio Hours

ART 116 Painting I**3 Credits**

Beginning painting instruction and practice in techniques of oil painting, still-lives, landscapes.

6 Studio Hours

ART 120 Sculpture Fundamentals**3 Credits**

Abstract elements of sculptural form as revealed through analysis of student work and historical examples. Emphasis on developing the student's ability to utilize concepts in practice and to expand his/her understanding of the general function of form as symbolic structure.

6 Studio Hours

ART 130 Ceramics

Study of the basic processes of the design and creation of ceramics, both functional and sculptural. Fundamentals of hand-building, potter's wheel, glazing and firing.

6 Studio Hours

ART 140 Printmaking

Three equal parts to course—linecut, woodcut, monotype. Explanation, uses, technical demands, potential and limitation of each process. Students to develop images for blocks or plates.

3 Class Hours

ART 215 Painting II

Continuation of painting instruction and practice done in ART 116 Painting I.

6 Studio Hours

ART 216 Painting III

Painting from costumed model; advanced composition devices.

6 Studio Hours

ART 220 Life Sculpture

The principles of abstract form applied to the human body, and the expressive possibilities of the human figure explored. Studies of actual models in oil-base clay later to be cast into plaster or carved in wood or stone.

6 Studio Hours

Independent Study: Art**ART 297 Sculpture****ART 299 Art History**

An individual student project concerned with advanced work in a specific area of art. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in Art.

3 Credits

3 Credits

3 Credits

3 Credits

3 Credits

1-3 Credits

AUTOMOTIVE SERVICE SPECIALIST

These courses are all designed to provide theory-related instruction to supplement apprenticeship training on the job.

CAR 151 Auto Electrical Systems

Basic electrical systems found in automotive equipment: lighting and ignition systems, schematic troubleshooting, power assist systems, wiring harnesses.

3 Class Hours

CAR 152 Integrated Automotive Systems

Introductory course for automotive apprentices. Theory for foundation in the field of Automotive Technology.

3 Class Hours

CAR 153 Advanced Engine Diagnosis

Continuation of CAR 152 Integrated Automotive Systems, with special emphasis on advanced diagnostic testing and repair procedures. Application of the chassis dynamometer, HC/CO testers and oscilloscopes.

3 Class Hours

3 Credits

CAR 154 Brake Systems and Chassis Repair

Related trade theory of servicing brake systems, window regulators, seat mechanisms, exhaust systems and other chassis accessories. Delivery and road test procedures.

3 Class Hours

3 Credits

CAR 155 Steering and Suspension Systems

Steering systems (both power and manual), suspension systems, wheel alignment. Suspension, front end, steering repair and alignment.

3 Class Hours

3 Credits

CAR 156 Transmission and Drive Systems

Automatic transmissions, clutches, standard transmissions, overdrives, propeller shafts, drive axles. Theory of operation, diagnosis, maintenance and repair.

3 Class Hours

3 Credits

CAR 157 Power Plant Overhaul Theory

Theoretical procedures necessary to rebuild an automotive engine. Disassembly and assembly techniques along with the restoring of tolerances by the machining of engine components.

3 Class Hours

3 Credits

CAR 158 Heating and Air-Conditioning Theory

Automotive heating and air-conditioning systems emphasizing the basic air conditioning cycle.

3 Class Hours

3 Credits

CAR 159 Automotive Parts Department Management

In-depth study of parts numbering, storage, cataloging, retrieval, ordering, stocking, management techniques.

3 Class Hours

3 Credits

CAR 160 Automotive Service Department Management

Marketing techniques, financial analysis, personnel management, work scheduling and distribution, use of pricing manuals.

3 Class Hours

3 Credits

BIOLOGY**BIO 111 General Biology I**

Principles of evolution and ecology as unifying themes in biology. Evolutionary processes and ecological adaptations illustrated by plant and animal diversity. The community of cellular life processes. Current environmental problems. The laboratory includes field trips, during which about 40 plant species are observed.

3 Class Hours, 3 Laboratory Hours

4 Credits

BIO 112 General Biology II

Principles of evolution and ecology as unifying themes in biology. The human animal and its systems. Concepts of animal behavior. Classical genetics, current concepts of gene function and human genetics. Organismal growth and development. Current environmental problems. The laboratory includes field trips, during which about 40 local bird species are observed.

3 Class Hours, 3 Laboratory Hours

4 Credits

BIO 120 Human Sexuality**3 Credits**

Explores information about sexual attitudes, relationships, sexual anatomy, contraception, venereal disease. Course aims to make students feel more comfortable thinking and talking about sex and to prepare them to make rational decisions about this important aspect of their lives.

3 Class Hours**BIO 131 Human Biology I****4 Credits**

Normal structure (gross and microscopic) and function of the skeletal, muscular and nervous systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.

3 Class Hours, 2 Laboratory Hours**BIO 132 Human Biology II****4 Credits**

A continuation of BIO 131 Human Biology I covering the circulatory, respiratory, digestive, urinary, reproductive and endocrine systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** BIO 131 Human Biology I or permission of instructor**BIO 140 Pathophysiology****3 Credits**

Symptoms, syndrome and etiology of pathogenic processes affecting the function and structure of the body.

3 Class Hours**Prerequisite:** BIO 132 Human Biology II**BIO 150 Microbiology I****4 Credits**

The biology of the common bacteria and related microorganisms. General microbiology including asepsis, disinfection, sterilization, cultivation, pathogenicity, resistance, identification.

3 Class Hours, 3 Laboratory Hours**BIO 160 Microbiology****3 Credits**

Position of microorganisms in the biological world, as well as their cultivation and identification. Asepsis, disinfection and sterilization. Disease transmission and the human elements in defense. For Medical Office Assistant and Dental Hygiene students.

2 Class Hours, 3 Laboratory Hours**BIO 295 Biology Seminar—Current****Trends in Biology****1 Credit**

Current trends and developments in the biological sciences presented and discussed by students. Each student is expected to present at least one oral report per semester and to take part in the discussions of other reports. Use of recent literature is stressed. Seminar may be taken each semester for a maximum of 2 credits.

1 Class Hour**Prerequisite:** A college general biology course or permission of instructor***TAUGHT EVENINGS ONLY****CHEMISTRY AND CHEMICAL ENGINEERING
TECHNOLOGY****CHM 102 Preparatory Chemistry****4 Credits**

Introductory course in chemistry emphasizing problem-solving techniques related to chemical concepts. Atomic structure, stoichiometry, metric units, chemical bonding, chemical nomenclature, solution chemistry.

4 Class Hours**CHM 120 Fundamental Chemistry****4 Credits**

First course for Fire Protection Technology, Health Sciences and Criminal Justice students. Composition of substances, atomic structure, periodicity, bonding, chemical equations, states of matter, aqueous solutions, chemical equilibria and introduction to organic chemistry.

3 Class Hours, 3 Laboratory Hours**CHM 121 Forensic Sciences****4 Credits**

Introduction to forensic chemistry for Criminal Justice students. Examination of firearms, cartridges, explosives, drugs and other types of physical evidence. Emphasis on proper handling of substances found in crime scene investigations. Laboratory techniques include many modern instrumental methods, such as gas chromatography, infrared and mass spectroscopy.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 120 Fundamental Chemistry or permission of department**CHM 125* Chemistry****3 Credits**

Fundamental concepts of inorganic chemistry. Composition of substances, kinetic and molecular theories, atomic structure and bonding, solutions and colloids, ions in solution and introduction to organic chemistry. For Fire Protection Technology students.

2 Class Hours, 3 Laboratory Hours**CHM 131 Chemistry****4 Credits**

Fundamental concepts of inorganic chemistry. Stoichiometry, atomic structure, periodicity, chemical bonding, kinetic theory, states of matter, acids and chemical equilibria. For Medical Laboratory Technology students.

3 Class Hours, 3 Laboratory Hours**CHM 132 Chemistry****4 Credits**

A continuation of CHM 131 Chemistry including chemical equilibria, coordination chemistry and an extensive treatment of classical quantitative analysis. For Medical Laboratory Technology students.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 131 Chemistry**CHM 141 General Chemistry****4 Credits**

Chemical principles, applications and laboratory experimentation to evaluate important scientific and technological issues in our complex society. Energy sources: coal, gas, petroleum, solar, geothermal, food. Radioactivity, effects of radiation, nuclear weapons and man's effect on the climate. Warming of the earth, the greenhouse effect, atmospheric particles, supersonic transport, weather modifications. For Liberal Arts non-science majors.

3 Class Hours, 3 Laboratory Hours

CHM 142 General Chemistry**4 Credits**

A continuation of CHM 141 General Chemistry. Chemistry of the air, water, and land environment. Chemicals in the internal environment: food and drugs. Basic concepts of organic chemistry, polymers and plastics, natural and synthetic organic medicinal compounds, legislation of food additives, regulation of carcinogens, chemistry of living systems, chemistry in criminal investigations. For Liberal Arts non-science majors.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 141 General Chemistry**CHM 145 Chemistry****4 Credits**

A comprehensive treatment of general chemistry for the science-oriented student emphasizing the quantitative relationships in chemical reactions and the current atomic and bonding theories explaining chemical phenomena. Periodicity, writing, balancing and interpretation of chemical equations, stoichiometric calculations based on equations, solution stoichiometry. Laws governing physical states and changes in state, physical properties of solutions. For Engineering Science and Liberal Arts science majors.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** High School Chemistry or CHM 102 Preparatory Chemistry**CHM 146 Chemistry****4 Credits**

Continuation of CHM 145 Chemistry including chemical thermodynamics, kinetics, acid-base theory, chemical equilibrium, equilibria in aqueous solution and electrochemistry. For Engineering Science and Liberal Arts science majors.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 145 Chemistry**CHM 161 Chemistry****4 Credits**

Basic concepts underlying chemical action emphasizing measurement, basic chemical calculations, atomic structure and the periodic law. Chemical bonding, states of matter, solutions, kinetic and molecular theories, chemical equilibrium and energy changes in chemical reactions. Laboratory stresses techniques in chemical manipulations and data collection. For Chemical Technology students.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** High School Chemistry or CHM 102 Preparatory Chemistry**CHM 162 Chemistry****4 Credits**

A continuation of CHM 161 Chemistry. Oxidation-reduction and electrochemistry, acids, bases and salts. Solubility product principle and coordination compounds. Laboratory work stresses qualitative and quantitative methods and techniques. For Chemical Technology students.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 161 Chemistry**CHM 221 Organic Chemistry****3 Credits**

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory covers techniques of separation and purification including gas chromatography, spectroscopy and synthesis. For Medical Laboratory Technology students.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 132 Chemistry**CHM 222 Organic Chemistry****3 Credits**

A continuation of CHM 221 Organic Chemistry including a study of the structure, reactivity and stereochemistry of important biomolecules. Laboratory includes multi-step synthesis as well as selected experiments with biomolecules.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 221 Organic Chemistry**CHM 224 Instrumental Analysis****4 Credits**

Theory and laboratory instruction in electrochemical and optical methods of analytical chemistry, including potentiometry, polarography, amperometry, coulometry, conductimetry, radiochemistry. Ultraviolet-visible, infrared, atomic absorption and emission spectroscopy. Column, thin-layer and gas chromatography. For Medical Laboratory Technology students.

2 Class Hours, 6 Laboratory Hours**Prerequisite:** CHM 132 Chemistry**CHM 245 Organic Chemistry****5 Credits**

A fundamental treatment of organic chemistry. Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separation, purification and isolation by classical methods as well as modern instrumental techniques. For Liberal Arts science majors and Engineering Science students with departmental approval.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** CHM 146 Chemistry or CHM 162 Chemistry**CHM 246 Organic Chemistry****5 Credits**

A continuation of CHM 245. Also includes such biomolecules as fats, carbohydrates, proteins and nucleic acids. The laboratory emphasizes multistep syntheses and qualitative organic analysis.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** CHM 245 Organic Chemistry**CHM 261 Organic Chemistry****5 Credits**

A systematic study of organic chemistry. Nomenclature, structures, reaction mechanisms, chemical properties, syntheses, effects on man and his environment. Laboratory experiments include separations, identifications, syntheses. For Chemical Technology students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** 1 year of college General Chemistry or CHM 162 Chemistry**CHM 262 Organic Chemistry****5 Credits**

An extension of CHM 261 Organic Chemistry, a systematic study of organic compounds. Spectroscopy, heterocyclic compounds and polymer chemistry. For Chemical Technology students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** CHM 261 Organic Chemistry**CHM 265 Instrumental Methods****of Chemical Analysis****5 Credits**

Principles and techniques of modern quantitative analysis including Kjeldahl nitrogen analysis, chelatometry, ion-exchange, non-aqueous titrations, conductimetry, coulometry, electrogravimetry, polarography, amperometry, potentiometry, radioisotope methodology. Statistical evaluation of data obtained by the various analytical methods. For Chemical Technology and Liberal Arts "Chemical Model" students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** 1 full year of college General Chemistry and MAT 142 Applied Calculus I and PHY 142 Physics

CHM 266 Instrumental Methods**of Chemical Analysis****5 Credits**

Principles and techniques of modern instrumental methods of chemical analysis including ultraviolet, visible, infrared, nuclear magnetic resonance, atomic absorption, emission and mass spectroscopy. Column, thin-layer, gel permeation, gas and liquid-liquid chromatography. Chemical microscopy and differential thermal analysis. For Chemical Technology and Liberal Arts "Chemical Model" students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** 1 full year of College General Chemistry and**MAT 142 Applied Calculus I and PHY 142 Physics****CHM 271 Chemical Processes****5 Credits**

Material and energy balances along with applied chemical and physical principles as they apply to chemical engineering. Emphasis on problem-solving in the classroom and engineering reports in the laboratory.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** 1 full year of General Chemistry and**MAT 142 Applied Calculus I and PHY 142 Physics****CHM 272 Chemical Processes****5 Credits**

Staged operations dealing with phase equilibrium. Graphical, analytical and computer methods are used to solve unit operations problems. The laboratory emphasizes engineering reports.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** CHM 271 Chemical Processes**CHM 290 Forensic Toxicology****3 Credits**

Application of the principles of forensic toxicology and the related forensic sciences within the scope of medical-legal investigation. Drug and poison analysis, examination of physical evidence and death investigation. Optional laboratory sessions will provide basic knowledge of forensic analysis utilizing microscopy, gas chromatography, thin layer chromatography and spectroscopy.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** CHM 120 Fundamental Chemistry or a semester of General Chemistry or permission of instructor**CHM 291* Organic Chemistry I****3 Credits****CHM 292* Organic Chemistry II****3 Credits**

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separations and isolation by classical methods as well as modern instrumental techniques.

2 Class Hours, 3 Laboratory Hours each**Prerequisites:** CHM 146 Chemistry for CHM 291**CHM 291 Organic Chemistry I for CHM 292****CHM 293* Analytical-Instrumental Chemistry I****3 Credits**

Classical analytical chemistry—sampling, statistics, gravimetric and volumetric analysis. Introduction to electrochemistry.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 146 Chemistry**CHM 294* Analytical-Instrumental Chemistry II****3 Credits**

Continuation of CHM 293 Analytical-Instrumental Chemistry I.

Additional electrochemistry and electrochemical techniques. Emphasis on spectroscopic and chromatographic methods. Visible, infrared and nuclear magnetic resonance spectroscopy. Gas, liquid, column and thin layer chromatography.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 293 Analytical-Instrumental Chemistry I***TAUGHT EVENINGS ONLY****CHM 299 Independent Study****2-4 Credits**

The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Departmental approval**CHILD CARE**

Child Care (CDC) courses may not be used to satisfy the Social Science requirement.

The Child Care program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the program Coordinator of Child Care. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

MOST CHILD CARE COURSES (THOSE WITH CDC DESIGNATION) ARE OFFERED ONLY IN THE EVENING. FULL-TIME CHILD CARE STUDENTS MUST PLAN FOR BOTH DAY AND EVENING CLASSES.

CDC 100* Introduction to Education**of Young Children****3 Credits**

An over-all view of nursery education and where it is going. Discussion of various philosophies and methods, programming, scheduling (what should go into scheduling a day for a pre-schooler and when). Focus on social, emotional and physical needs of young children and the importance of the "self concept" for both the child and the adult working with young children. Introduction to the college's Child Care program covering requirements, courses and career information. A required number of observations in pre-schools, nurseries and day care centers in the area, as well as a special laboratory project. Required of Child Care majors.

2 Class Hours, 2 Laboratory Hours**CDC 115* Music for Young Children****3 Credits**

How to develop the whole child through the use of music. This course will be of a practical application for the teacher. Various techniques and methods will be demonstrated through the use of songs, records, eurhythmics, rhythm instruments and creative activities. Class participation will be a vital part of this course. Students will be expected to apply these various methods and activities with young children.

3 Class Hours**CDC 120* Curriculum Development****3 Credits**

A pre-school curriculum for students planning to work in day-care centers and nursery schools. Emphasis on how art, language, math, creative play, science and outdoor play programs are used for the physical, social, emotional and mental development of the young child. Sharing and implementing ideas through special projects and construction and implementation of material related to specified areas. Students will be required to perform certain activities in a nursery school setting or with groups of children.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** CDC 100 Introduction to Education of Young Children**CDC 140* Art for Young Children****3 Credits**

In-depth coverage of art education as it contributes to the pre-school child's emotional, physical and psychological growth. Needs of pre-schoolers in this area and ways to foster creativity and skill acquisition. Materials and methods appropriate for this age. A laboratory experience working with pre-schoolers in art will be required.

2 Class Hours, 2 Laboratory Hours

CDC 150* Motor Development**3 Credits**

Designed to give the student an understanding of normal motor development and how it relates to cognitive and perceptual development. Students will be exposed to programs and activities in motor development for young children.

3 Class Hours**CDC 160* Nutrition****3 Credits**

Basics of good nutrition with emphasis on children. Ideas on planning and preparing snacks and meals and teaching good nutrition habits to children. Ideas on fitting nutrition into the nursery education curriculum and tying it to other subjects. Projects for practical application and experience in a nursery school setting. (Not offered in 1980-81 academic year).

2 Class Hours, 2 Laboratory Hours**CDC 170* Practicum I****3 Credits**

Designed to meet the needs of both the experienced and the inexperienced students. The inexperienced student is placed in a classroom setting conducive to the learning of desired teacher competencies, working with an experienced supervising teacher. Six hours per week for twelve weeks in this situation. Self-evaluation as well as being evaluated by others.

The experienced student is given some credit for work experience. For him/her, the practicum emphasizes self-evaluation according to classroom competencies. Both experienced and inexperienced students in group seminars with a college representative and meeting for individual consultations. Required of Child Care majors.

Prerequisite: 30 hours of counseled coursework**Taught evenings, field work days****CDC 180* Child Health and Safety****3 Credits**

Designed to help students become aware of techniques for promoting general health care and safety standards at children's centers. Red Cross First Aid and Safety Course included. (Not offered in 1980-81 academic year).

3 Class Hours**CDC 200* Social Psychology of Education****3 Credits**

An investigation of the social and psychological factors that affect a child's learning processes. How the interaction of the unique characteristics of teachers, community, family and society contribute to the learning environment of the classroom. How learning outcomes can be efficiently achieved. Desirable conditions for learning. Required of Child Care majors.

2 Class Hours, 2 Laboratory Hours**Prerequisite: PSY 110 General Psychology****CDC 210* Special Problems in Children****3 Credits**

How to understand and help the child with a special problem. Normal adjustment problems, learning disabilities, physical handicaps, retardation and the emotionally disturbed child. Techniques for the classroom teacher and places to get help. Actual student involvement with children who exhibit these problems.

2 Class Hours, 2 Laboratory Hours**Prerequisite: PSY 211 Child Development****CDC 220* Issues and Innovations in****Early Childhood Education****3 Credits**

An overview and insight into various philosophies and materials of education for young children, including Montessori, Piaget, open education (comparing English and American schools), affective education, behavior modification. The course aims to develop the competency of the student through practical application.

3 Class Hours**Prerequisite: CDC 100 Introduction to Education of Young Children****CDC 230* Working with Parents in Nursery Programs****3 Credits**

Designed to introduce the need for the parent's involvement in the education of the young child. Benefits for teachers, parents and children, when teachers and parents work closely together. Consideration of feelings of teachers and parents which help or hinder their working together. Various aspects of working with parents, such as home visiting, group parent meetings, newsletters and written communications, parent conferences and the use of volunteers in the classroom. Part of the course on a workshop basis, and students required to develop a special project to earn their third credit. (Not offered in 1980-81 academic year).

2 Class Hours, 2 Laboratory Hours**Prerequisite: CDC 100 Introduction to Education of Young Children****CDC 250* Language in Early Childhood****3 Credits**

A developmental study of language growth in young children and its influence on learning (cognitive abilities, social and behavioral concepts). Contemporary language theories and programs including a diagnostic approach to teaching language (communication skills, reading readiness and literature appreciation) in the pre-school. The student will be expected to spend a number of hours in a special project requiring observations of individual children and language arts programs. (Not offered in 1980-81 academic year).

2 Class Hours, 2 Laboratory Hours**Prerequisite: CDC 100 Introduction to Education of Young Children****CDC 290* Practicum II****6 Credits**

Designed to be flexible depending upon the needs and interests of the student. Project for experienced students based on the development of these needs and interests. Project must be approved. The experienced student to share ideas from his/her areas of strength in seminar situations.

For the inexperienced student, a classroom situation to conduct a self-evaluation of own competencies as a teacher, as well as being evaluated by others. Work with an experienced supervising teacher. The inexperienced student to spend 9 hours per week in a classroom situation for 12 weeks. Required of Child Care majors.

Prerequisite: CDC 170 Practicum I**Taught evenings, field work days****CDC 299 Independent Study in Child Care****1-2-3 Credits**

An individual student project in child care beyond the scope or requirements of the courses offered by the department. Under the direction of a faculty member and approved by the program coordinator and department chairman. No more than 3 credits may be acquired toward the Child Care degree in independent study projects.

1-2-3- Class Hours**Prerequisite: 6 Semester hours in Child Care courses****CIVIL ENGINEERING TECHNOLOGY****CIV 111 Surveying I****4 Credits**

Plane surveying including distance measurement, note keeping, leveling, angle measurement, care and use of instruments, stadia, record searching, deed descriptions, traversing, coordinates, area computation, map inking and sewer stakeout.

2 Class Hours, 6 Laboratory Hours**Corequisite: MAT 141 College Algebra and Trigonometry*****TAUGHT EVENINGS ONLY**

CIV 112 Surveying II**2 Credits**

A continuation of CIV 111 Surveying I including mapping, field astronomy, precise leveling, triangulation, electronic measurements and public land surveys.

1 Class Hour, 3 Laboratory Hours

Prerequisite: CIV 111 Surveying I

CIV 115 Engineering Drawing**2 Credits**

Fundamentals of Engineering Drawing including care and use of instruments, linework, lettering, dimensioning, orthographic projection, sections, auxiliary views, detailing and an introduction to architectural drawing.

1 Class Hour, 3 Laboratory Hours

CIV 117 Architectural Drafting**2 Credits**

Fundamentals of architectural drafting including floor plans, elevations, sections, details, schedules, plot plans, plumbing layouts, electrical layouts. Emphasis on residential drawings.

1 Class Hour, 3 Laboratory Hours

Prerequisite: CIV 115 Engineering Drawing

CIV 124 Mechanics (Statics)**3 Credits**

Static force systems and equilibrium. Free body diagrams, trusses, graphic static, spatial force systems, friction, centroids, moments of inertia.

3 Class Hours

Corequisite: PHY 141 Physics

CIV 155* Surveying**3 Credits**

Plane surveying including distance measurement, note keeping, compass surveying, leveling, angle measurement, care and use of instruments, stadia, traversing, coordinates, area computation, mapping and records.

2 Class Hours, 3 Laboratory Hours

Prerequisites: MAT 139 Algebra and MAT 140 Trigonometry or MAT 141 College Algebra and Trigonometry

CIV 156* Route Surveying**4 Credits**

Horizontal and vertical curves, spirals, sight distances and earthwork. Introduction to computer applications. Laboratory includes problem sessions using the college's computer to solve coordinate geometric problems.

3 Class Hours, 2 Laboratory Hours

Prerequisite: CIV 155 Surveying

CIV 159* Architectural Drafting I**3 Credits**

Development of working drawings for use in residential type construction. Plot plans, floor plans, elevations, details, mechanical and electrical layouts. Lectures to include construction materials, specifications and methods.

2 Class Hours, 3 Laboratory Hours

CIV 160* Architectural Drafting II**3 Credits**

A continuation of CIV 159 Architectural Drafting I. Development of working drawings for two-story and split-level residences. (Not offered in 1980-81 academic year).

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 159 Architectural Drafting I

CIV 161* Architectural Drafting III**3 Credits**

Development of a set of working drawings for a small two-story commercial building including floor plans, elevations, sections, details, mechanical and electrical layouts, window and door schedules. Term project. (Not offered in 1980-81 academic year).

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 160 Architectural Drafting II

CIV 163* Plain Concrete**2 Credits**

Cements, aggregates and plain concrete, including the testing of cements and aggregates, the design mixing, testing, placing, curing control and inspection of plain concrete. ASTM and AASHTO standards.

2 Class Hours

CIV 212 Route Surveying and Photogrammetry**4 Credits**

Route Surveying: Simple and compound curves, vertical curves, spirals and earthwork. Selected topics in route selection, field technique and route design. Computer applications (COGO).

Photogrammetry: Basic optics, geometry of aerial photography, flight planning, ground control, stereoscopy and parallax, stereo pairs, mosaics and plotting instruments.

3 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 111 Surveying I

CIV 215 Strength of Materials**4 Credits**

Concepts of stress and strain. Simple stress, strain, torsion, shear and moment, stresses in beams, beam deflections, statically indeterminate beams, composite members, columns, combined stresses.

4 Class Hours

Prerequisite: CIV 124 Mechanics (Statics)

CIV 217 Materials Testing**3 Credits**

Composition, properties and testing of construction materials. Major emphasis on plain concrete. Aggregates, cements, admixtures, design and proportioning of concrete mixes, curing and inspection. Bituminous materials and ferrous metals, load and deformation measurements, behavior of materials under load, strain gauges.

2 Class Hours, 3 Laboratory Hours

Corequisite: CIV 215 Strength of Materials

CIV 224 Reinforced Concrete Design**3 Credits**

Fundamental theory and principles for the design of reinforced concrete. Design, analysis and detailing of rectangular beams. T-beams, beams reinforced for compression, columns and footings. Emphasis on ultimate strength design methods. Theory of prestressed concrete. An integrated design and detailing project.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 215 Strength of Materials

CIV 226 Structural Steel Design**3 Credits**

Fundamental theory and principles necessary for design of simple steel structures. Design, investigation and detailing of beams, columns, tension and compression members and their connections. Composite beams. An integrated design and detailing project.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 215 Strength of Materials

CIV 228* Estimating and Construction Planning**3 Credits**

A systematic approach to estimating building project costs combined with a study of construction management and the critical path method of scheduling.

2 Class Hours, 2 Laboratory Hours

CIV 231 Estimating and Construction Planning**3 Credits**

A systematic approach to estimating building project costs combined with a study of the critical path method of scheduling.

2 Class Hours, 3 Laboratory Hours

***TAUGHT EVENINGS ONLY**

CIV 235 Hydraulics

Hydraulics including properties of fluids, hydrostatics, fluid motion in or through orifices, nozzles, pipes, weirs, open channels, hydraulic machinery, pipe branches and networks.

3 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 124 Mechanics (Statics)

CIV 236 Construction Management

Principles of construction management, specification writing, with emphasis on planning, building, scheduling and controlling a project.

3 Class Hours

CIV 238 Architectural Design and Building Materials

Design and detailing of commercial buildings including site considerations, space requirements, layout planning, building materials, manufacturing processes, construction methods, working drawings. Emphasis on individual creativity. Semester project.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 117 Architectural Drafting I

CIV 240 Soil Mechanics

Soil origin and nature, soil density, test borings, gradation compaction, soil water, frost in soil, classification, stress, shear strength, bearing capacity, piles. The laboratory covers ASTM and AASHTO specifications used in classifying and predicting behavior of soils.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 215 Strength of Materials

CIV 244 Environmental Sanitation

Population studies, water supply, transportation, distribution and treatment. Sewage collection and treatment, unit operations. Communicable diseases, biological and chemical aspects of water and sewage. Refuse sanitation, air pollution, industrial wastes, radioactivity.

3 Class Hours

Prerequisite: CIV 235 Hydraulics

CIV 251* Elementary Structural Analysis I

Introduction of structural analysis. Reactions, shear and moment diagrams, truss analysis, graphic statics, influence lines, moving loads, approximate analysis of indeterminate structures, deflections.

3 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials

CIV 252* Elementary Structural Analysis II

Continuation of CIV 251 Elementary Structural Analysis I. Deflections, indeterminate beams and frames, Castigliano's theorems, three moment equations, slope deflections, moment distribution, column analogy and plastic analysis. Computer applications.

3 Class Hours

Prerequisite: CIV 251 Elementary Structural Analysis I

CIV 255* Reinforced Concrete Design

Fundamental behavior of reinforced concrete. Design and analysis of rectangular beams, T-beams, beams reinforced for compression, columns and footings. Major emphasis on ultimate strength design methods. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials

4 Credits

3 Credits

3 Credits

3 Credits

3 Credits

3 Credits

3 Credits

3 Credits

CIV 257* Structural Steel Design

Fundamental theory and principles necessary for design of simple steel structures. Design and analysis of beams, columns, tension members, compression members and their connections. Composite beams, framing systems, loads and forces. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials

CIV 260* Environmental Sanitation

Communicable diseases, water requirements and waste volumes, water supplies, transportation and distribution of water, chemical and biological aspects. Water treatment, waste water treatment including biological and physical treatments. Emphasis on municipal systems. Individual systems. (Not offered in 1980-81 academic year).

4 Class Hours

CIV 262* Soil Mechanics

Origin and nature of soil, soil physics, sampling soil water, flow nets and seepage forces, classification, frost action, stability, retaining walls, piles, and underground conduits.

4 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials or permission of instructor.

CIV 266* Hydraulics

A basic course in theory and practical applications of hydraulics. Properties of fluids, measurements, hydrostatics, dynamic problems of both pipe and open channel flow. Application and limitations of some of the design aids in common use. (Not offered in 1980-81 academic year).

3 Class Hours

CIV 268* Engineering Economics

Use of compound interest in financing and in determining engineering cost comparisons. Introduction to depreciation methods. Illustrative cases and problems (personal and engineering) including New York State Professional Engineering Examination problems.

2 Class Hours

Prerequisite: MAT 139 Algebra or equivalent

CIV 270* Highway Design

Phases of highway design in sequence from initiation to final design. Classification of highways, criteria and controls for both horizontal and vertical alignment, typical section, cost estimate, and other features associated with design. A broad review of the scope and content of final plans, specifications and engineers estimate. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: CIV 155 Surveying and CIV 156 Route Surveying or permission of instructor.

3 Credits

4 Credits

4 Credits

3 Credits

2 Credits

3 Credits

***TAUGHT EVENINGS ONLY**

COMMUNICATIONS

COM 110 Introduction to Photography 3 Credits

Basics of camera design and operation, plus the fundamentals of photographic visualization and composition: line, form, color, light, shadow. Darkroom procedures, film processing, basic printmaking, selective printing techniques. (Students must have their own 35mm single lens reflex camera and should expect to pay for their own photographic materials.)

3 Class Hours

COM 120 Introduction to Audio and Video Production 3 Credits

Theory and practice. Emphasis on actual experience with a variety of equipment: microphones, reel to reel and audio cassette tape recorders, black and white and color videotape players and recorders, portable videotape equipment.

3 Class Hours

See ENG 200 Media and Culture on page 87.

COMPUTER STUDIES COURSES

The CST courses are designed to acquaint students with the computer and its capabilities and to provide opportunities for "hands-on" experience.

Because many college programs and industries depend on the computer to process data rapidly, both transfer-minded students and those preparing for immediate employment after graduation are introduced to the capabilities of the computer.

The College has a large computer system capable of supporting both the College's administrative and academic computing concurrently. The batch computing facilities and 30 time-sharing terminals are available to support the academic pursuits of all students.

CST 100 BASIC 1 Credit

Arithmetic expressions, conditional transfers, conversational programming, loops, subscripted variables, functions and subroutines. Conforms to American National Standard for Minimal BASIC

(Half semester)

1 Class Hour, 2 Laboratory Hours

CST 110 Introduction to Data Processing 3 Credits

Historical development and current influences exerted on our society by the computer. Basic computer concepts including data entry, hardware and software components that comprise a computer system. Introduction to a computer programming language, with emphasis on logical problem definition and documentation using a time sharing system.

3 Class Hours

CST 111 Introduction to Computer Studies 3 Credits

Introduction to the concepts of computer science, data manipulation and the language-independent development of problem solutions. Efficient use of system utilities, text editors and programming tools. Documentation. Coding and number systems. Boolean algebra. Overview of computer hardware and software. Specific applications and how they are accomplished.

3 Class Hours

Recommended Corequisite: CST 115 Problem Solving with Pascal

CST 112 Computer Logic 3 Credits

Comprehensive coverage of basic logic gates, computer arithmetic, Boolean Algebra and Karnaugh Mapping, with a view toward circuit simplification. Adders, subtractors, multiplexers, code converters, asynchronous and synchronous counters presented in detail as basic computer building blocks. Interfacing between analog-digital and digital-analog covered as the method of communicating with the computer. Laboratory exercises utilize TTL and CMOS logic chips to reinforce material presented in lectures.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing or instructor's permission

CST 115 Problem Solving with Pascal 3 Credits

Introduction to problem solving by computer using the structured programming language Pascal. Programming steps include problem definition, outline of solution, selection of algorithms, coding, debugging, testing and validating, documenting, program maintenance. Pascal syntax includes scalar, structured data types, assignment statements and arithmetic expressions, control statements, input and output statements, functions and procedures. Examples will introduce the basic algorithms used in computer science.

2 Class Hours, 2 Laboratory Hours

Prerequisite: MAT 003B Basic Math Review or equivalent

Corequisite: CST 111 Introduction to Computer Studies

CST 116 RPG II 3 Credits

Fundamentals of RPG (Report Program Generator) programming language. Beginning language for small business installations, especially those converting manual or unit record systems to computer. Explanation of specification sheets, internal logic, branching and table look-up operations.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 118 Computer Programming—COBOL 3 Credits

Fundamentals of ANSI COBOL applied to solutions of commercially oriented problems. A number of problems assigned for execution on the computer.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 120 Computer Programming—FORTRAN 3 Credits

Programming solutions to business problems utilizing the FORTRAN IV language. Emphasis on documentation procedures, techniques of programming and error analysis, simulation of business data processing in a laboratory environment. For business students.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 122 Scientific Computer Programming**—FORTRAN****3 Credits**

Introduction to problem solving techniques using FORTRAN including development of an algorithm, flow charting, program writing, debugging, storage and execution, input and output, loop techniques, array manipulation, file control and control of on-line equipment, structured programming, terminal and batch operations. Material to be covered taken from student's area of study. For engineering technology students.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** Working knowledge of algebra and trigonometry**CST 124 Computer Programming for Engineers****3 Credits**

FORTRAN IV programming, block diagramming, numbering and coding systems. Use of graphic plotter, derivation and application of empirical equation analysis, application of matrix algebra, application of simulated time and iteration procedures.

2 Class Hours, 2 Laboratory Hours**CST 126 Assembly Programming—BAL****3 Credits**

Fundamentals of assembly level programming using BAL. Emphasis on the use of assembly language in solving a number of programming problems.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** CST 110 Introduction to Data Processing**CST 130 PL/1****3 Credits**

Introduction to PL/1, a general purpose language capable of conveniently handling both scientific and business problems. Basic program elements, nesting, looping, string techniques, arrays and structures, procedures, input/output and formatting.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** One programming language or instructor's permission**CST 200 Systems Analysis****3 Credits**

Principles of systems analysis, problem solving and implementation of computer systems including the importance of standards, procedures, security and documentation. Each student to complete a programming project utilizing his/her knowledge from this and other Computer Studies courses. A team case study approach and guest speeches provide the format of work sessions.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** One programming language or instructor's permission**CST 202 Data Structures****3 Credits**

Static and dynamic data structures. Choice of proper structure to organize data. Arrays, records, files, linked lists, trees, stacks, queues and directed graphs with applications. Programming will be done in Pascal. (Not offered in 1980-81 academic year).

2 Class Hours, 2 Laboratory Hours**Prerequisites:** CST 115 Problem Solving with Pascal and MAT 154 Discrete Mathematics II**CST 205 Advanced FORTRAN with Graphics****3 Credits**

A further study of the proper way to write FORTRAN programs. Use of logical structures to define complicated systems, use of subroutines, simulation programming, file structures, queues, searching, sorting. Emphasis on use of school's plotter and graphics terminals. Class project involving graphics, statistics.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** CST 120 or CST 122 Computer Programming—FORTRAN or CST 124 Computer Programming for Engineers**CST 217 Advanced RPG II****3 Credits**

Multiple content breaks, processing within limits, exception output, arrays, tables and sorts. Special emphasis on sequential, indexed and direct disk file techniques. Laboratory exercises business oriented and run by students in a hands-on environment. Techniques taught are applicable to an actual business environment.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** CST 116 RPG II**CST 218 Advanced COBOL****3 Credits**

A second course in the use of the COBOL language as a means of implementing computerized solutions to data processing problems. Batch and interactive processing, various file access techniques, use of advanced language statements and of various utilities available to the COBOL programmer.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** CST 118 COBOL**CST 220 Introduction to Microprocessors****3 Credits**

Digital codes, microprocessor definitions and terms, flow charting, branching, flags, indexing and extended addressing, stack operations, subroutines and system interrupts. Such interfacing concepts as rams, clocks, input and output, buses, tri-states. Extensive use of the 6800 microprocessor.

2 Class Hours, 2 Laboratory Hours**Prerequisites:** CST 112 Computer Logic and High Level Programming Language**CST 222 Topics in Computer Systems****3 Credits**

Functions of the hardware components of a computer system and the operating system. Addressing, bus and channel devices, virtual memory, scheduling, queueing, spooling, multi-programming, real-time processing, timesharing. Communications systems, various communications techniques and the hardware and software involved. (Not offered in 1980-81 academic year).

3 Class Hours**Prerequisite:** CST 205 Advanced FORTRAN**CRIMINAL JUSTICE**

Criminal Justice (CRJ) courses may not be used to satisfy the Social Science requirement.

The Criminal Justice program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the Program Coordinator of Criminal Justice. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

CRJ 101 Introduction to Criminal Justice**3 Credits**

Overview of the major components of the criminal justice system—law enforcement, prosecution, trial courts and corrections. A systems approach is utilized with an emphasis on the structure, functions and interdependence of these and other criminal justice system components. (Formerly CRJ 100).

3 Class Hours

**THE FOLLOWING CRIMINAL JUSTICE COURSES
ARE TAUGHT IN THE EVENING ONLY**

CRJ 105 Introduction to Corrections

3 Credits

Overview of the corrections components of the criminal justice system, tracing the history of corrections in the United States. Relationships and interdependencies of corrections with the court and law enforcement components of the criminal justice system and a discussion of the theoretical basis for the four major types of correctional models. (Formerly CRJ 240).

3 Class Hours

CRJ 115 Juvenile Justice System

3 Credits

Overview of the juvenile justice system, including the history, process, status and philosophy of the juvenile court. Law enforcement handling of juveniles, various theories of delinquency causation, correctional programs and alternative methods of dealing with juvenile offenders. (Formerly CRJ 250).

3 Class Hours

CRJ 125 Penal Law

3 Credits

Essential elements of the various crimes under the New York State Penal Law. The concepts of culpability and criminal defenses recognized under the New York State Penal Law as they relate to murder, rape, robbery, burglary, arson, assault, drug offenses, disorderly conduct and harassment. (Formerly CRJ 210).

3 Class Hours

CRJ 130 Introduction to Security

3 Credits

Organization and management of the security function in industry, business, government and institutions. The protection of personnel, facilities and other assets, as well as administrative, legal and technical problems of loss prevention and control. (Formerly CRJ 260).

3 Class Hours

**CRJ 212 Criminal Procedure and
Constitutional Law**

3 Credits

The right to counsel, search and seizure, confessions, lineups, electronic surveillance, probation and parole. (Formerly CRJ 120).

3 Class Hours

Prerequisite: CRJ 101 Introduction to Criminal Justice

CRJ 215 Police Administration

3 Credits

Fundamentals of organization, supervision and over-all management of police and civilian personnel. Designed to supply a background for the student in dealing with the complexities involved in the management aspects of various police agencies. (Formerly CRJ 110).

3 Class Hours

Prerequisite: CRJ 101 Introduction to Criminal Justice

CRJ 220 Evidence for Law Enforcement

3 Credits

A practical examination of the law of evidence, as it pertains to the function of persons engaged in law enforcement. Fundamental concepts and terminology, due process of obtaining evidence in criminal investigations, search and seizure, confessions, identification to the process of presenting evidence at hearings and trials of criminal cases (scientific evidence, direct and cross examination of witnesses).

3 Class Hours

Prerequisites: CRJ 101 Introduction to Criminal Justice and CRJ 125 Penal Law.

CRJ 230 Criminal Investigation

3 Credits

Basic principles of investigation as they relate to the collection, preservation, identification and examination of physical evidence. Techniques for locating and interviewing witnesses and for interrogating suspects. Common myths associated with detective work.

3 Class Hours

Prerequisites: CRJ 101 Introduction to Criminal Justice and CRJ 125 Penal Law

**CRJ 235 Understanding and Changing
Criminal Behavior**

3 Credits

In-depth examination of the various theories utilized in explaining and dealing with criminal behavior. Theories emanating from the fields of psychology, sociology and biology provide the basis of this examination. A seminar approach. Participation of students will be expected to document and report their activities.

3 Class Hours

Prerequisites: CRJ 101 Introduction to Criminal Justice and CRJ 105 Introduction to Corrections.

CRJ 255 Special Topics in Criminal Justice

1-3 Credits

The specific area to be covered will be based upon identified needs and interests of criminal justice students. This course also provides a forum for professional individuals in the criminal justice field with a particular expertise to share their knowledge and skills with students.

1-3 Class Hours

Prerequisites: CRJ 101 Introduction to Criminal Justice and 2 other CRJ courses.

CRJ 299 Independent Study

1-3 Credits

An individual student project concerned with advanced level work beyond the scope or breadth of regular courses. A specific area or topic is investigated under the direction of a faculty member. Must be approved by department chairperson.

Prerequisite: CRJ 101 Introduction to Criminal Justice and 6 credits in CRJ courses.

DENTAL HYGIENE

DEN 101 Dental Hygiene I

4 Credits

Contemporary practice of dental hygiene and factors affecting such practice. Principles of instrumentation, root planning, polishing in pre-clinical environment. Clinical experience in some of the basic techniques of dental hygiene care, such as oral prophylaxis, care of equipment and dental first aid.

2 Class Hours, 6 Laboratory Hours

DEN 102 Dental Hygiene II

4 Credits

Continuation of DEN 101 Dental Hygiene I. Clinical experience in the theory, techniques, procedures of dental hygiene care.

2 Class Hours, 8 Laboratory Hours

Prerequisites: DEN 101 Dental Hygiene I and BIO 131 Human Biology I and DEN 103 Oral Anatomy and Physiology

DEN 103 Oral Anatomy and Physiology **4 Credits**
Normal structure and function of the oral cavity (microscopic and gross). Laboratory work provides experience with traditional approaches to oral anatomy and physiology.
2 Class Hours, 4 Laboratory Hours

DEN 105 Nutrition **3 Credits**
Nutrients necessary for healthy functioning of human beings in various stages of the life cycle—functions, sources, conditions resulting from excessive and inadequate intake of each nutrient. Composition of foods from various plant and animal sources and their use in planning an adequate and balanced diet.
3 Class Hours
Prerequisite: DEN 103 Oral Anatomy and Physiology

DEN 106 Clinical Dental Radiography **2 Credits**
Nature and behavior of radiation, biological benefits and hazards, maintenance of radiation hygiene, use and care of the X-ray machine. Intraoral and extraoral dental radiographic techniques performed on manikins and patients, film processing and mounting, radiographic interpretation.
1 Class Hour, 2 Laboratory Hours
Prerequisites: DEN 101 Dental Hygiene I and DEN 103 Oral Anatomy and Physiology and BIO 131 Human Biology I and Geometry or Geometry module

DEN 201 Dental Hygiene III **7 Credits**
Continuation of DEN 102 Dental Hygiene II. Integration of theory with clinical experience in various oral hygiene preventive procedures, selected expanded duties and essential business aspects of a dental office.
4 Class Hours, 12 Laboratory Hours
Prerequisites: DEN 102 Dental Hygiene II, DEN 104 Nutrition, DEN 106 Clinical Dental Radiography, and BIO 160 Microbiology

DEN 202 Dental Hygiene IV **6 Credits**
Continuation of DEN 201 Dental Hygiene III. Clinical experience in all phases of dental hygiene care. Emphasis on planning and execution of the total treatment plan concept.
2 Class Hours, 12 Laboratory Hours
Prerequisites: DEN 201 Dental Hygiene III, DEN 204 General and Oral Pathology and DEN 205 Periodontology

DEN 204 General and Oral Pathology **3 Credits**
Broad picture of the disease process through the study of common general diseases, their causes, results and treatment. Emphasis on the principles of inflammation, healing and repair, oral diseases, their causes, recognition and treatment.
2 Class Hours
Prerequisites: DEN 102 Dental Hygiene II, DEN 104 Nutrition, BIO 160 Microbiology and BIO 132 Human Biology II

DEN 205 Periodontology **2 Credits**
Pathology of the periodontium. Emphasis on recognition and treatment of the periodontal patient within the scope of the dental hygienist.
2 Class Hours
Prerequisites: DEN 102 Dental Hygiene II, DEN 103 Oral Anatomy and Physiology, DEN 106 Clinical Dental Radiography, BIO 132 Human Biology II and BIO 160 Microbiology

***TAUGHT EVENINGS ONLY**

DEN 206 Dental Pharmacology **2 Credits**
Pharmacology as it affects the clinical practice of dental hygiene and dentistry. Drugs commonly used in dentistry and correct methods for their use. Emphasis on pharmacological aspects of anesthesia.
2 Class Hours
Prerequisites: BIO 132 Human Biology II and BIO 160 Microbiology

DEN 210 Dental Materials **3 Credits**
Composition, chemical and physical properties and use of materials used in the dental laboratory and operator. Laboratory sessions will provide experience in performing common dental laboratory procedures and background for clinical application of expanded functions.
2 Class Hours, 2 Laboratory Hours
Prerequisite: DEN 201 Dental Hygiene III

DEN 213 Public Health **3 Credits**
Principal responsibilities and functions of public health. Tools for measuring a population's needs and demands and how they are met. Community public and dental health agencies and programs. Research relating to dental diseases. Roles and opportunities for dental hygiene in public health. A special project, on-campus or off, must be completed.
3 Class Hours

DEN 214 Dental Specialties **2 Credits**
Integration, comparison and study of all the special fields of dentistry including endodontics, periodontics, oral surgery, public health, prostodontics, pedodontics and orthodontics.
2 Class Hours
Prerequisite: DEN 201 Dental Hygiene III

DIETETIC ASSISTANT

To take these courses, students must be employed in the field so that they can schedule directed practice hours.

DIA 100* Introduction to Principles of Basic Nutrition **3 Credits**
Designed to develop an awareness and appreciation of the importance and scope of the science of nutrition. Factors contributing to individual differences in food and eating patterns, nutritional needs at various stages of life, functions and sources of major nutrients, sociological impacts of nutrition.
3 Class Hours

DIA 101* Nutrition **3 Credits**
The social, cultural, psychological and physiological functions of food. Nutrition care throughout the life cycle. Special consideration given to modifications of the basic diet to meet the needs of the resident in health care facilities. Techniques of interviewing and medical ethics.
2 Class Hours, 4 Directed Practice

DIA 102* Institution Food Preparation **3 Credits**
Principles of food preparation, standardization of recipes, menu structure and planning. Serving, merchandising and promotion of food items. Various food preparation equipment and techniques. Sanitary food handling and holding practices emphasized.
2 Class Hours, 4 Directed Practice

DIA 201* Food Management Systems

An introduction to the health field and its inter-relationships. The concept of management including the principles of organizing, evaluation, and the decision making process. Control through specification, purchasing, inventory and cost analysis. Equipment, housekeeping, sanitation and safety practices.

2 Class Hours, 4 Directed Practice

3 Credits

DIA 202* Personnel Management

Leadership and supervisory techniques. Implications of authority and responsibilities. Understanding and communicating with workers and co-workers. Employee recruitment, training and evaluation. Morale and labor relations. Analysis of duties and work simplification performance and motivation.

2 Class Hours, 4 Directed Practice

3 Credits

ECONOMICS

ECO 101 Consumer Economics

Institutions and forces directly affecting the consumer: consumer income and expenditure patterns, personal finance, credit and tax problems. Personal investment alternatives. Impact of the consumer movement on the individual and society.

3 Class Hours

3 Credits

ECO 104 Labor Economics and American Industry

Interaction between business, labor and government. Analysis of the causes of unemployment and income inequality. Connection between productivity, wages, prices and employment and application of anti-trust and labor laws to firms and unions.

3 Class Hours

3 Credits

ECO 107 Health Economics and Law

Economic aspects of health care in America. Demand for medical services, factors which influence its cost, supply and adequate delivery. Alternate ways of solving problems posed. The role of government, social and economic policy in the health care field. Emphasis on the application of micro-economics to health care issues. Medical law as it affects those in medically related fields. Students who have taken ECO 110 Introduction to Micro-Economics must have the permission of the instructor to enroll in this course.

3 Class Hours

3 Credits

ECO 110 Introduction to Micro-Economics

Supply, demand and the market system as they relate to contemporary economic problems including poverty, energy, the environment and urban decay. The allocation of resources under conditions of competition and various degrees of monopoly. Rationale behind anti-trust laws and other governmental attempts to control monopoly power and promote economic well-being. Comparative economic systems.

3 Class Hours

3 Credits

ECO 111 Introduction to Macro-Economics

Causes of unemployment and inflation and the government's efforts to control them. Problems of economic growth as they relate to our economy and to other countries, developed and underdeveloped. International trade and finance problems.

3 Class Hours

3 Credits

ECO 120 American Economic History

A topical approach to the economic impetus behind the growth and development of the United States. Colonial heritage and the market system, population and natural resources, agriculture, transportation, labor, business, the capital market and the influence of government. Understanding today's economic problems by observing how they developed historically.

3 Class Hours

3 Credits

ECO 140 Economics of Urban Problems

Application of economic analysis to urban problems, an understanding of the economic forces that affect housing, transportation, poverty, crime, land use, the financing of urban services and the urban future.

3 Class Hours

3 Credits

ECO 253 Money and Banking

An examination of money, credit and financial institutions, emphasizing how the monetary system influences economic activity. Nature and functions of money, the commercial banking system and other financial institutions, the roles of the Federal Reserve System and the Treasury, monetary policy and international money problems.

3 Class Hours

Prerequisite: ECO 111 Introduction to Macro-Economics

3 Credits

ECO 299 Independent Study

An individual student project in economics which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

Prerequisite: 3 semester hours in economics

1-3 Credits

ELECTRICAL ENGINEERING TECHNOLOGY

EET 111 Electrical Construction Laboratory I

Basic knowledge about today's electrical equipment. Experience in the installation, fabrication and maintenance of electrical equipment by means of "hands-on" approach. Shop safety and the National Electrical Code. Basic residential and commercial wiring procedures, basic measuring techniques, fundamentals of basic machine operations.

1 Class Hour, 3 Laboratory Hours

2 Credits

EET 112 Electrical Construction Laboratory II

Advanced wiring methods, fractional horsepower motor and appliance troubleshooting, introduction to residential and commercial lighting and power layout-design.

3 Laboratory Hours

Prerequisite: EET 111 Electrical Construction Laboratory I

1 Credit

EET 121 Electrical Circuits

Fundamentals of electrical circuits and application of circuit laws, theorems and measuring techniques to both d-c and a-c single and polyphase circuits.

4 Class Hours, 3 Laboratory Hours

5 Credits

*TAUGHT EVENINGS ONLY

EET 125* Circuits I

D-c circuits, including loop and nodal analysis, superposition, Thevenin's and Norton's theorems, RL and RC time constants.

2 Class Hours, 2 Laboratory Hours

Prerequisite: MAT 139 Algebra or equivalent

Student may take MAT 139 concurrently with this course

3 Credits

EET 126* Circuits II

A continuation of the study of circuits concepts related to single and three-phase alternating current. Resonance, network analysis, power.

2 Class Hours, 2 Laboratory Hours

Prerequisite: MAT 140 Trigonometry or equivalent and EET 125 Circuits I

Student may take MAT 140 concurrently with this course

3 Credits

EET 130 Engineering Drawing

Principles of projection. Development of drafting skills, lettering and proper line construction. Dimensioning and tolerancing, with an emphasis on shop processes. Use of auxiliary views and sectioning. Preparation of assembly drawings, materials lists, schematic and wiring diagrams.

3 Laboratory Hours

1 Credit

EET 150 Electronics I

Principles of resonance, inductive coupling, transformers, RL and RC time constants, rectification. Characteristics of electronic devices including diodes, bipolar transistors, field effect transistors, tubes, unijunction transistors, thyristors and special purpose devices. Biasing techniques, load line analysis, rule-of-thumb design, hybrid parameters. Computer used to solve problems.

4 Class Hours, 3 Laboratory Hours

Prerequisites: MAT 141 College Algebra and Trigonometry and CST 122

Scientific Computer Programming—FORTRAN and EET 121 Electrical Circuits

5 Credits

EET 162 Computer Aided Network Analysis

Computer analysis of complex electrical and electronic networks by application of network theorems. Use of a second computer language (Basic) to display the response of two port networks. Use of the computer to apply matrix methods to the analysis of complex circuits and the solution of network problems.

3 Class Hours

Prerequisites: CST 122 Scientific Computer Programming—FORTRAN and EET 121 Electrical Circuits and MAT 141 College Algebra and Trigonometry

3 Credits

EET 185 Electricity

Practical applications of electrical concepts as applied to basic d-c and a-c circuitry, motors, alternators, energy sources and protection equipment. Laboratory work includes demonstration of concepts by students; operation of common electrical measuring instruments such as multimeters, oscilloscopes, wattmeters and bridges; operation of basic a-c motor starters.

2 Class Hours, 3 Laboratory Hours

Prerequisites: PHY 142 Physics (Electricity and Magnetism) and MAT 141 College Algebra and Trigonometry

3 Credits

EET 186 Electronics

Practical applications of electronic concepts as applied to solid state devices, amplifiers, power supplies, oscillators, timers, multivibrators and basic logic devices. Laboratory work includes practical applications of concepts by students, operation of common electronic instruments such as oscilloscope, curve tracer, function generator and counter.

2 Class Hours, 3 Laboratory Hours

Prerequisite: EET 185 Electricity

3 Credits

EET 230 Electronic Design and Fabrication

Selection, package design and construction of an electronic project and preparation of related drawings. Use of various manufacturing processes to fabricate the project. Use of industrial standard drafting practices to properly describe the operations. Chassis layout, printed circuit board design and etch, wiring, soldering, enclosure.

3 Laboratory Hours

Prerequisites: EET 130 Engineering Drawing and EET 251 Electronics II and EET 112 Electrical Construction Laboratory II

1 Credit

EET 235* Electrical and Electronics Drawing

Graphic representation of circuitry related to the electrical and electronics fields. Use of industrial standards and symbolism to draw electronic, schematic and wiring diagrams, printed circuit layout and electronics assemblies. Construction of one-line power distribution diagrams, industrial motor control diagrams and a commercial lighting layout.

1 Class Hour, 2 Laboratory Hours

Prerequisites: MET 113 Engineering Drawing 1 and EET 255 Electronics I

2 Credits

EET 241 Electrical Machines and Controls I

Theory, operation and application of d-c machines, and their magnetic and solid state control. Theory and application of single and polyphase power transformers and rectifiers. Generation and use of three-phase power.

3 Class Hours, 3 Laboratory Hours

Prerequisite: EET 150 Electronics I

4 Credits

EET 242 Electrical Machines and Controls II

Theory, operation and application of a-c motors and controls. Principles of open and closed loop systems. Theory, operation, application of industrial equipment used in control systems.

4 Class Hours, 3 Laboratory Hours

Prerequisite: EET 241 Electrical Machines and Controls I

5 Credits

EET 245* Electrical Machines

D-c and a-c machine theory, application and control. Single phase and polyphase transformers, solid state rectification.

3 Class Hours, 2 Laboratory Hours

Prerequisite: EET 126 Circuits II

4 Credits

EET 251 Electronics II

Basic configurations of active devices, equivalent circuits, performance predictions, frequency response, Bode plots, negative feedback, operational amplifiers, integrated circuits, active filters.

3 Class Hours, 3 Laboratory Hours

Prerequisite: EET 150 Electronics I

4 Credits

***TAUGHT EVENINGS ONLY**

EET 252 Electronics III**4 Credits**

Passive and active waveshaping, non-sinusoidal oscillators, sinusoidal oscillators, large signal amplifiers, regulated power supplies, elements of communications systems.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** EET 251 Electronics II**EET 255* Electronics I****4 Credits**

Principles of amplification, rectification, filtering and regulation. Characteristics of electronic devices including diodes, bipolar transistors, field effect transistors, operational amplifiers, tubes, unijunction transistors, thyristors and special purpose devices. Biasing techniques, load line analysis and equivalent circuits.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 126 Circuits II**EET 256* Electronics II****4 Credits**

Basic configurations of active devices, equivalent circuits, performance predictions, frequency response, Bode plots, negative feedback, operational amplifiers, integrated circuits, active filters.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 255 Electronics I**EET 257* Electronics III****4 Credits**

Passive and active waveshaping, non-sinusoidal oscillators, sinusoidal oscillators, large signal amplifiers, regulated power supplies, timers, phase locked loops and elements of communications systems.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 256 Electronics II**EET 267 Digital Electronics and Microprocessors I****4 Credits**

Use of electronic circuitry to solve mathematical problems. Digital computer hardware and number systems. Building blocks, sub-system and system operations. Construction and use of monolithic integrated circuits including applications and limitations of available families. Appropriate laboratory exercises provide hands-on experience in the application of digital circuits.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 150 Electronics I or EET 255 Electronics I**EET 268* Digital Electronics and Microprocessors II****4 Credits**

Use of a modern microcomputer in real time control applications, such as testing complex circuitry using microcomputers, display systems, A to D conversions, timing. Troubleshooting microcomputers, internal operations, and recent developments. Programming in assembly language with an introduction to HLL emphasized as a tool for interfacing. Laboratory exercises provide experience on many different systems with different end applications.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 267 Digital Electronics and Microprocessors I**EET 299 Independent Study****2-4 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a job-related assignment. Any independent study project is based on instructor availability.

Prerequisite: Departmental Approval**ENGINEERING****EGR 110 Introduction to Technologies****1/2 Credit**

Introduction to the college and its policies, placement, transfer and study skills. Reasonable proficiency in the use of the hand calculator is developed. For engineering technology freshmen.

1 Class Hour**EGR 130* Professional Engineers****Review Course****5 Credits**

For those qualified who plan to take the New York State Licensing Examination. New requirements for the National Examination. Physics, statics, dynamics, mechanics of materials, electrical theory, economic analysis, mathematics, fluid mechanics, thermodynamics, systems analysis, computer science. Chemical, civil, electrical and mechanical engineering problems. This course can also serve as a guide for self-study for any engineer who wishes to review the broad subject areas in engineering. This is a 30-week course.

2 1/2 Laboratory Hours**EGR 281 Mechanics (Statics)****3 Credits**

Fundamental concepts of the statics of rigid bodies developed by using a vector analysis approach. Force systems, centroids and centers of gravity, analysis of structures, shear and bending moments, friction and moments of inertia.

3 Class Hours**Prerequisite:** 1 year of calculus and PHY 181 Physics I**EGR 282 Mechanics (Dynamics)****3 Credits**

Concepts using vector analysis approach to kinematics and kinetics of particles, systems of particles, kinematics and kinetics of rigid bodies. Forces, mass, acceleration impulse, momentum, work and energy techniques.

3 Class Hours**Prerequisite:** EGR 281 Mechanics (Statics)**EGR 285 Electrical and Electronic Circuits****3 Credits**

Units, Coulomb's Law, Ohm's Law, Faraday's Law, Kirchhoff's Law, energy and power. Resistance, inductance and capacitance parameters. Series and parallel circuits, superposition theorem, network analysis by mesh currents, nodal techniques. Thevenin's Theorem, network reduction. Techniques for solving step response, pulse response, forced response, natural response and complete response. A-c circuits, phasors, impedances, resonance. Transistor parameters, linear equivalent circuits, biasing methods. Single, double and triple amplifier response in terms of gain, bandpass. Coupling techniques.

3 Class Hours**Prerequisite:** 1 year of calculus and 1 year of physics or permission of instructor**EGR 286 Engineering Analysis****1 Credit**

Statistical treatment of experimental data, introduction to microprocessors with digital logic.

1 Class Hour**Prerequisite:** 1 year of calculus and a high-level programming language***TAUGHT EVENINGS ONLY**

EGR 287 Engineering Science Laboratory I **1 Credit**
 Experimentation in electrical and electronic circuits, heat and sound. Some of the experiments may include independent projects.
3 Laboratory Hours
Prerequisite: 1 year of calculus and 1 year of laboratory physics
Co-requisite: EGR 285 Electrical and Electronic Circuits

EGR 288 Engineering Science Laboratory II **1 Credit**
 Experimentation in atomic and nuclear physics, light and microprocessors. Some of the experiments may include independent projects.
3 Laboratory Hours
Prerequisite: EGR 287 Engineering Science Laboratory I
Co-requisite: EGR 286 Engineering Analysis

EGR 299 Independent Project **2-4 Credits**
 The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Departmental Approval

ENGLISH

After completing a writing sample, students may be directed by the English Department to enroll in ENG 100 Basic Language Skills, a special writing center course. Students generally begin a composition sequence with ENG 110 Written Expression I.

ENG 100 Basic Language Skills **3 Credits**
 Writing workshops designed to improve a student's mastery of composition skill, including patterns of sentence structure and the recognition and correction of common errors in grammar and usage.
Minimum 3 Class Hours

ENG 104 English as a Second Language, Review **3 Credits**
 See description on page 88.

ENG 105 English as a Second Language, Intermediate I **3 Credits**
 See description on page 88.

ENG 106 English as a Second Language, Intermediate II **3 Credits**
 See description on page 88.

ENG 107 English as a Second Language, Advanced **3 Credits**
 See description on page 88.

ENG 110 Written Expression I **3 Credits**
 Study and practice in the composition of ideas and information. Sentence and paragraph development, unity, coherence, style. Nature of language, including investigation of various aspects of communication to stimulate critical thinking.
3 Class Hours

ENG 120 Written Expression II **3 Credits**
 Further study and practice in critical and evaluative writing based upon analysis of major types of imaginative literature. Familiarization and practice with research procedures.
3 Class Hours
Prerequisite: ENG 110 Written Expression I or permission of instructor.

ENG 150 Technical Writing **3 Credits**
 Principles and practice of writing to be eventually required of students in technology programs as part of their professional duties. Emphasis on analysis and preparation of reports, articles and technical correspondence.
3 Class Hours
Prerequisite: ENG 107 English as a Second language, Advanced or ENG 110 Written Expression I or permission of instructor.

ENG 160 Expository Writing **3 Credits**
 An intensive course in expository, persuasive and critical writing for students who have already mastered the basic skills of written expression. Emphasis on critical reading of professional essayists and articles.
3 Class Hours
Prerequisite: ENG 120 Written Expression II

ENG 165 Creative Writing—Publication **4 Credits**
 Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor. Writing, evaluating and arranging of material for a campus literary magazine.
3 Class Hours plus Workshop Hours

ENG 166 Creative Writing **3 Credits**
 Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor.
3 Class Hours

ENG 200 Media and Culture **3 Credits**
 A critical examination of the mechanisms and influences of radio, television and film media on the individual and on society. Exposure to culturally important media works and to some of the important commentators on these works. (Liberal Arts students may not use this course to fulfill composition or literature requirements.)
3 Class Hours

ENG 299 Independent Study: English **3 Credits**
 An individual student project concerned with advanced work in a specific area of language or literature. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: One semester of college level work.

ENGLISH-AS-A-SECOND-LANGUAGE COURSES

The following English courses are especially designed for international students, who are enrolled in appropriate English courses after diagnostic testing by the English Department. For programs requiring six credits of English instruction, any combination of two credit-bearing English-As-A-Second-Language courses fulfills the six credit English requirement, except with regard to programs requiring ENG 150 Technical Writing. In this case, students must comply with the prerequisite for entrance into ENG 150 Technical Writing: ENG 110 Written Expression I or ENG 107 English As A Second Language, Advanced, or permission of the instructor.

ENG 104 English as a Second Language, Review **3 Credits**

Intensive review of pre-intermediate levels of the English language for international students. Emphasis on listening, reading, speaking and some aspects of writing.
3 Class Hours

ENG 105 English as a Second Language, Intermediate I **3 Credits**

Study of the English language for international students with listening, reading, speaking, writing skills on the intermediate level. Language workshops emphasizing grammar, syntax, vocabulary and comprehension.
3 Class Hours

Prerequisite: ENG 104 English as a Second Language, Review or equivalent

ENG 106 English as a Second Language, Intermediate II **3 Credits**

Expanded study of the English language for international students. Emphasis on the development of basic English compositional skills. Continued practice in listening, reading and speaking.
3 Class Hours

Prerequisite: ENG 105 English as a Second Language, Intermediate I or equivalent

ENG 107 English as a Second Language, Advanced **3 Credits**

Advanced study and practice in the composition of ideas and information for international students. Sentence and paragraph development, unity, coherence, style. Writing workshops for intensive practice in the formation of standard and idiomatic English. Investigation of the nature of language and various aspects of communication to stimulate critical thinking.
3 Class Hours

Prerequisite: ENG 106 English as a Second Language, Intermediate II or equivalent.

***TAUGHT EVENINGS ONLY**

FIRE PROTECTION TECHNOLOGY

FRS 101* Fire Prevention and Protection **3 Credits**

Methods, policies and procedures relative to establishing and operating appropriate fire prevention and protection programs. (Not offered in 1980-81 academic year).

3 Class Hours

FRS 103* Fire Fighting Tactics and Strategy **3 Credits**

Focus on pre-planning and the development of fire fighting tactics appropriate for a wide variety of hazards. Review of basic information and some local conditions. The case study method is used to develop plans and tactics relating to the student's own departments.

3 Class Hours

FRS 105* Arson Investigation **3 Credits**

Fire investigations and arson. Responsibilities of the arson investigator, tools of the investigator, photography, electronic devices, laws pertaining to arson, motives and tools of the arsonist, courtroom procedures. A field experience will be included. (Not offered in 1980-81 academic year).

3 Class Hours

FRS 107 Legal Aspects of the Fire Service **3 Credits**

Laws and regulations as they pertain to the fire service and its personnel. Legal terminology necessary for the interpretation of pertinent laws and decisions. Legal status of the fireman, his rights, duties and liabilities. Responsibilities and powers of the fire service in enforcement of ordinances and codes.

3 Class Hours

FRS 108* Building Construction for Fire Science **3 Credits**

Fire fighters are confronted with many unknown factors at the fire ground. Among these is the unknown structural stability of the buildings they must enter. Basic principles of building construction and design with emphasis focused on fire protection concerns. Building materials included.

3 Class Hours

FRS 200* Hazardous Materials **3 Credits**

Chemicals and chemical processes most closely involved in fire protection and fire fighting. Use, storage, transportation and disposal of hazardous materials with emphasis on flammable liquids, flammable solids, oxidizing materials, corrosive liquids, compressed gases.

3 Class Hours

Prerequisite: Chemistry

FRS 201* Fire Service Hydraulics **3 Credits**

Application of the laws of mathematics and physics to properties of fluid states, force pressure and flow velocities. Emphasis in applying principles of hydraulics to fire-fighting problems. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: MAT 139 Algebra

FRS 205* Fire Department Administration **3 Credits**

Organization of fire departments with emphasis on personnel management, distribution of equipment, maintenance of records, communications, data collection and community relations. ISO Grading Schedule.

3 Class Hours

FRENCH

FRE 101, 102 Beginning French 4, 4 Credits

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each

Prerequisite: FRE 101 Beginning French for FRE 102

FRE 201 Intermediate French I 3 Credits

Intensive review of grammar and syntax and oral practice in classroom and audio-lingual laboratory. Reading and discussion of works selected by the instructor.

3 Class Hours, 1 Laboratory Hour

Prerequisite: FRE 102 Beginning French

FRE 202 Intermediate French II 3 Credits

Reading of literary works of recognized authors. Continuation of grammar, syntax and oral practices in classroom and audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour

Prerequisite: FRE 201 Intermediate French I

FRE 203 Masterpieces of French Prose and Poetry I 3 Credits

The Middle Ages through the Age of Reason. Readings, lectures and discussions of representative works. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: FRE 202 Intermediate French II

FRE 204 Masterpieces of French Prose and Poetry II 3 Credits

The Age of Romanticism to contemporary times. Readings, lectures and discussions of representative works. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: FRE 203 Masterpieces of French Prose and Poetry I

FRE 205 The Art of French Conversation and Composition 3 Credits

To develop the student's perception and appreciation of spoken and written French to prepare him or her for further study of the French language, literature and culture. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: FRE 201 and FRE 202 Intermediate French or equivalent

FRE 299 Independent Study: French 1-3 Credits

An individual student project concerned with advanced work in a specific area of French. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in French

GEOGRAPHY

GEO 110 Physical Geography 3 Credits

Interrelationships of global systems of climate, vegetation, soils, landform development and their significance to humans. The impact of human presence upon natural systems.

3 Class Hours

GERMAN

GER 101, 102 Beginning German 4,4 Credits

Basic principles of grammar and syntax. Emphasis on oral practice in classroom. Written homework assignments, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each

Prerequisite: GER 101 Beginning German for GER 102

GER 201 German Conversation and Composition 3 Credits

Emphasis on the four language skills—reading, writing, speaking, listening—especially on speaking and writing. Intensive discussion of style, grammar and the contemporary idiom to enhance the student's ability to express himself in German. (Not offered in 1980-81 academic year).

3 Class Hours, 1 Laboratory Hour

Prerequisite: GER 102 Beginning German

GER 299 Independent Study: German 1-3 Credits

An individual student project concerned with advanced work in a specific area of German. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in German

HISTORY

HIS 100 The Rise of the West 3 Credits

Core course required of all Liberal Arts students and a prerequisite for some other history (HIS) courses. However, even where it is not a prerequisite, students are urged to complete this course before enrolling in any other history course.

Introduction to both the study of history and the evolution of modern society, including its basic ideas, values and institutions, through an examination of Western Civilization. The Age of Transition—the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment. The Industrial Transformation, appearance of modern constitutional and authoritarian government, major socio-political ideologies—liberalism, socialism, communism, nationalism, imperialism, fascism, totalitarianism. The intellectual crisis of the 20th Century, World Wars I and II.

3 Class Hours

**CIVILIZATION SURVEYS
(HIS 130-161)**

Liberal Arts students may select any one of the following courses in order to satisfy the remainder of the history requirement.

HIS 130 United States History I 3 Credits

The United States from 1607 to 1898. The colonies, Revolution, Constitution, early national period, Age of Jackson, expansion, Civil War and Reconstruction, the West and the Gilded Age. Survey of political, economic, cultural developments through the 19th Century.

3 Class Hours

HIS 131 United States History II 3 Credits

The United States from 1898 to the present. The American Empire, progressive reforms, World War I, the Twenties, Depression, New Deal, World War II and the Cold War, post-war domestic issues.

3 Class Hours

HIS 141 Development of Modern Latin America 3 Credits

History of Latin America from Independence to the present, emphasizing the causes of political instability and economic backwardness. Close analyses of reform, reactionary and revolutionary movements in modern Latin America, and of inter-American affairs. (Formerly History of Latin America II.)

3 Class Hours

HIS 150 Russian and East European History I 3 Credits

Survey of Slavic history from early settlement in Kievan Russia and Eastern Europe, Mongol and Turkish conquests, rise of Muscovy and House of Hapsburg, reigns of Peter I and Catherine II, fate of Poland, Ottoman Empire in Europe, and other significant topics to the end of the Crimean War.

3 Class Hours

HIS 151 Russian and East European History II 3 Credits

From the latter half of the 19th Century including the gradual transition to modernity, imperialism of Russia, Austria and the Ottomans, rise of Balkan nationalism, the Dual Monarchy of Austria-Hungary, revolutions, World Wars I and II, Soviet hegemony and contemporary issues.

3 Class Hours

HIS 161 Modern China and Japan 3 Credits

Investigation and analysis of the history of modern China and Japan in the 19th and 20th Centuries. Emphasis on events and changes in East Asia since the end of World War II. The increasing importance of China and Japan to the stability of the modern world. Major cultural developments as they serve to illuminate the behavior of modern East Asians.

3 Class Hours

Prerequisite: HIS 100 The Rise of the West or HIS 131 United States History II

SPECIAL TOPICS IN HISTORY (HIS 170-199)

HIS 170 The Future as History: A Look at the 21st Century United States 3 Credits

Does the future have to be a shock? The objective of this course is to prove it does not have to be. Three or four possible courses which the next 100 years may take will be plotted, using knowledge of the economic, political and social developments of the past 100 years of U.S. history and a basic understanding of the present day situation.

3 Class Hours

Prerequisite: HIS 130 United States History I or HIS 131 United States History II or POS 201 Introduction to American Government

HIS 175 Local History 3 Credits

The early history of our local area including the late 18th Century Indian communities and the growth of 19th Century white settlements through development of industries and institutions from the days of the frontiersmen to the era of the railroaders and the factory hands. Historical methods of research. An historical walking tour of Binghamton, investigation of historical records on the premises of cooperative local institutions, and observation of contributions to local history. (Formerly HIS 231.)

3 Class Hours

HIS 180 Utopia: The History of Perfect Societies 3 Credits

Examines the relationship between the "real" and the "ideal" in fictional and actual utopian communities. Comparisons of utopian thought from the classical, medieval and modern periods, from the Garden of Eden to the contemporary commune. Writings of Plato, More, Condorcet, Owen, Saint-Simon, Fourier, Marx, Wells, Huxley, Teilhard de Chardin, Wagar and others.

3 Class Hours

HIS 183 Woman as a Force in History 3 Credits

Women's contributions to the evolution of Western institutions. Exploration of the origins of myths about women, women's roles in modern society, evolution of modern feminism. (Formerly HIS 227.)

3 Class Hours

HIS 185 Hitler and The Nazi Dictatorship 3 Credits

Origins of National Socialism, role of Adolf Hitler, road to Nazi Dictatorship, Nazi political and social revolutions, Hitler's foreign policy and Europe's reaction, World War II and Hitler's "New Order", Nazi system of persecution and genocide, collapse of the 1,000-year Reich, legacy of the Hitler period.

3 Class Hours

HIS 186 Modern American Social History 3 Credits

Historical currents of social change and social reform in the 20th Century from the latter part of the 19th Century to the "Great Society." Reformist themes bearing on health, welfare, civil rights, labor and women's suffrage against the backdrop of hostile and supportive private groups. Creation of public institutions to meet human needs (the U.S. Public Health Service, the Social Security Administration), the response of the courts to organized reformist pressure, and social needs still unmet. For students in health-related and human services career programs.

3 Class Hours

HIS 190 The World Since 1945

3 Credits

An overview of the changing patterns in world affairs since the end of World War 2 in 1945. For example, emergence of the Third World, the Cold War, responses to scientific/technological change, insurgent movements, attempts at world organization/disarmament, the energy/ecology crisis, the various trouble spots like the Middle East, Panama Canal, Berlin.

3 Class Hours

Prerequisite: HIS 100 The Rise of the West or HIS 131 United States History II

SHORT MODULES (HIS 200-295)

The department offers special short modules of courses that carry one credit each. These deal with concentrated topics in history and are less than one semester in length. For example, modules have been given in "The Great Man in History" series focusing on Adolf Hitler, Fidel Castro, Charles Darwin and Chairman Mao Tse-tung, each covering a 5-week period.

HIS 200 Series—Great Figures in History

1 Credit

Examining the advantages and disadvantages of using a biographical approach to the study of a particular period in history. In analyzing a "great figure," the student studies the interconnections between the actions of a great person, the role of chance and pressures of major social forces in shaping the course of human history.

3 Class Hours (For 5 weeks)

HIS 299 Independent Study

1-3 Credits

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson. Independent study does not satisfy the Liberal Arts requirement in history, and it may not be taken in lieu of a 100-series course.

Prerequisite: HIS 100 The Rise of the West

HUMAN DEVELOPMENT COURSES

Across the nation students have been indicating that they want the opportunity in college to identify, pursue and accomplish personal goals, to develop healthier self-concepts, to develop more effective levels of self-understanding and to become open human beings who can build trusting relationships with others. The student affairs courses can be one means of facilitating humanistic objectives espoused by "new" college students.

SAC 101 The Individual in a Changing Environment

3 Credits

Individual interaction and reading designed to foster understanding and application of psychological and emotional growth. Basic class material is the individual and group analysis of student's experience within an immediate unstructured setting. Focus on analysis and organization of experience into a personally rewarding conception of growth. Individual self-development projects outside the class.

3 Class Hours

SAC 295, 296 Seminar in Human Potential

3,2 Credits

Human Potential focuses on the person's own resources, strengths, motivators, values and successful and satisfying experiences. Human potential sessions are positive group experiences working on and with the potential and strengths of the feeling concerning one's self and others by utilizing specific procedures.

3, 2 Class Hours

HUMANITIES

HUM 201 The Concept of Man: Naturalism and Evolutionary Thought

3 Credits

An interdisciplinary course exposing the student to a broad spectrum of materials: drama, film, fiction and the arts, as well as expository anthropological and biological writing dealing with man's rediscovery of his "animality" and its effects on his self-concept. Focusing on the years 1850 to the present, the student reads such authors as Freud, Marx, Darwin, Crane, Dreiser, Zola, Morris, Lorenz and Shockley. Completion of a guided independent research project in an area of the student's interest is required. (Not offered in 1980-81 academic year).

3 Class Hours

INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE

SAF 100 OSHA Codes and Regulations

3 Credits

In-depth study of the federal Occupational Safety and Health Act of 1970 (OSHA). Other pertinent laws for the protection of the ambient and occupational environments, how they are put together, what is pertinent and how they are used.

3 Class Hours

SAF 101 Accident Investigation and Prevention

3 Credits

Identification of present and future hazards in facilities, operations and products. Methods of investigation of hazards, reports of injuries, property damage and their causes. Development of accident prevention and loss control methods, procedures and programs.

3 Class Hours

SAF 102 Design and Evaluation of a Safety Program

3 Credits

Development of comprehensive program to protect the employee from potential health hazards in the work environment. Elements of a comprehensive industrial hygiene survey: evaluating existing control mechanisms, review of process or operations, inventory of hazardous materials sources, field study and results, corrective action plan and methods of control.

3 Class Hours

SAF 105 Material Handling and Storage of Special and Common Products

3 Credits

An in-depth study of handling and storage principles and procedures. Personal injuries, improper techniques and hazards of special materials, as well as correct methods and procedures. Visits to industrial sites.

3 Class Hours

SAF 110 Ventilation and Exhaust

3 Credits

Principles of ventilation and ventilation control. Student will visit various industries to study the practical application of systems, engineering problems, methods of control of industrial wastes through the systems.

3 Class Hours

SAF 111 Machine Guarding

Various types of methods and systems in use, advantages and disadvantages of types, design of appropriate machine guarding for work being done. Visits to industrial sites.

3 Class Hours

3 Credits

SAF 120 Introduction to Industrial Hygiene

Fundamentals of industrial hygiene, review of basic mathematics, chemical concepts, associated biochemical concepts, industrial toxicology techniques. Use of guides, codes, regulations and standards for chemical and physical agents. Concepts of a noise program and air sampling.

3 Class Hours

Prerequisite: Chemistry or permission of instructor

3 Credits

SAF 130 Product Safety

Intended and potential uses of a product, its material and construction. Establishment of general requirements for the application of safety principles throughout planning, design, development, fabrication and test of various products to achieve maximum product safety. (Not offered in 1980-81 academic year).

3 Class Hours

3 Credits

SAF 250 Special Topics: Safety

An opportunity to explore in depth special topics and problems in Industrial Safety and Health. May be repeated once for credit as the subjects will vary from semester to semester.

1-3 Credits

INTERIOR DESIGN

**INT 101 History of Architecture—
Exterior and Interior**

Survey of exterior and interior architectural styles from Ancient Egyptian through 20th Century.

3 Class Hours

3 Credits

INT 110 Interior Design I

Color; projects in residential interior design including color coordination, floor plan, space utilization. Study of currently available resources.

2 Class Hours, 4 Laboratory Hours

4 Credits

INT 111 Interior Design II

Continuation of INT 110 Interior Design I. Projects in window treatments, walls and floors. Lighting problems. Practical experience in methods of measuring, estimating and installation. Materials for windows, walls and floors.

2 Class Hours, 4 Laboratory Hours

Prerequisite: INT 110 Interior Design I

4 Credits

**INT 120 Construction and Workroom
Techniques I**

Study of processes, manufacture and installation of interior design products.

2 Class Hours

2 Credits

**INT 121 Specification Writing
for Interior Designers**

Techniques used in writing specifications for interior design projects.

2 Class Hours, 1 Laboratory Hour

2 Credits

INT 130 Rendering

Perspectives of room interiors: treats the problems of representation related to light, texture and color.

4 Laboratory Hours

2 Credits

INT 140 Fabric Analysis

Types of fabrics used in interior design including methods of manufacturing, fiber and construction analysis, historical origins.

2 Class Hours

2 Credits

ITALIAN

ITA 101, 102 Beginning Italian

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each

Prerequisite: ITA 101 Beginning Italian for ITA 102

4, 4 Credits

ITA 201 Intermediate Italian I

Comprehensive review of grammar and structure of the language. Intensive reading of literary works as a basis for topics of conversation in Italian in the classroom. Emphasis on aural comprehension and oral practice in classroom and audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour

Prerequisite: ITA 102 Beginning Italian

3 Credits

ITA 202 Intermediate Italian II

Intensive reading of literary works of recognized authors as a basis for topics of conversation in Italian in the classroom. Practice in audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour

Prerequisite: ITA 201 Intermediate Italian I

3 Credits

ITA 299 Independent Study: Italian

An individualized student project concerned with advanced work in a specific area of Italian. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in Italian

1-3 Credits

LITERATURE

The Department of English recommends that students complete a composition program before taking literature courses.

LIT 210 Studies in United States Literature I

History and development of United States literature from colonial period to late 19th Century. Emphasis on several major writers of the period.

3 Class Hours

3 Credits

LIT 211 Studies in United States Literature II

History and development of United States literature from late 19th Century to the present. Emphasis on several major writers of the period.

3 Class Hours

3 Credits

LIT 214 Studies in British Literature I **3 Credits**
History and development of British literature from the Middle Ages to the 18th Century. Selections of literary merit from prose, drama, poetry.
3 Class Hours

LIT 215 Studies in British Literature II **3 Credits**
History and development of British literature from the beginning of the 18th Century to the middle of the 20th.
3 Class Hours

LIT 220 The World of the Short Story **3 Credits**
An examination of the development of American, British and Continental short stories. Emphasis on theme and structure.
3 Class Hours

LIT 230 American Drama **3 Credits**
Studies in dramatic theories, techniques and thematic problems of the American drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 233 World Drama **3 Credits**
Studies in dramatic theories, techniques and thematic relationships of the world drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 240 The Poetic Experience:
Sight and Sound **3 Credits**
An exploration of the different modes and moods of poetic expression. A thematic and structural approach to poetry as a total experience.
3 Class Hours

LIT 250 Portraits of Women:
Search for Understanding **3 Credits**
An in-depth examination of what it means to be a woman as presented by representative literary artists, both women and men, in critically acclaimed pieces of literature. Emphasis on 19th and 20th Century material.
3 Class Hours

LIT 253 Psychological Investigation
in Literature **3 Credits**
The application of Jungian, Freudian and other psychological theories and insights to selected short stories, novels, and poems to promote more penetrating appreciation of characters' motivations and actions and the literary work in general.
3 Class Hours

LIT 255 Modern Existential Literature **3 Credits**
An investigation of the themes of alienation and the absurd in selected prose and poetry to shed light on man's current existential crisis.
3 Class Hours

LIT 257 Heritage of Modern Literature **3 Credits**
An attempt to define modern literature as an embodiment and development of antique themes and traditions through the comparative study of the epic, the novel and related genre.
3 Class Hours

LIT 260 Detective Fiction **3 Credits**
A critical study of one of the most popular literary forms of our time designed for armchair detectives. Starting with Poe, Conan Doyle (Sherlock Holmes) and other classics in the field, the course traces the development of the detective story from its puzzle-solving beginnings to the modern psychological novel of crime and detection.
3 Class Hours

LIT 263 Children's Literature **3 Credits**
Children's literature with introduction to the variety of books available today and development of standards for evaluating them. Prime concern is to help the student use literature with children creatively, recognizing the importance of language, arts, communication and listening skills in cognitive development.
3 Class Hours

LIT 265 Biblical Literature **3 Credits**
An acquisition of the skills necessary to study the Bible. Emphasis on the Biblical narrative and its relationship to Western culture through reading and analysis.
3 Class Hours

LIT 269 Prison Literature **3 Credits**
An examination of the prison experience through a variety of readings in prose and poetry that focus on man's continuing struggle to understand this social phenomenon.
3 Class Hours

MARKETING COURSES

are under the Business heading starting on page 68

MATHEMATICS

MAT 003 Basic Mathematics Review

3 Credits*

* Credit is not applicable toward A.A., A.S., or A.A.S. degrees. Basic Mathematics Review is designed to give the student proficiency in elementary mathematics and provide a firm foundation for credit courses. It consists of three units allowing each department to select the units needed as prerequisites for its courses or programs.

3 Class Hours

A. Arithmetic and Introduction to Algebra

Arithmetic of whole numbers, fractions and decimals. Percent, measurement, metric units, ratio and proportion. Language of algebra, arithmetic of signed numbers, solving simple equations. Problem solving.

B. Elementary Algebra

Addition, subtraction, multiplication, division and simplification of algebraic expressions. Graphing. Solving linear equations and inequalities in two variables.

Prerequisite: Basic Mathematics Review A

C. Geometry and Introduction to Trigonometry

Properties and measurements of angles. Similar and congruent triangles, polygons and circles. Perimeter, area and volume measurements. Use of trigonometric ratios to solve right triangle problems.

Prerequisite: Basic Mathematics Review A

Basic Math Review is a self-paced course. Students use self-study texts and audio-visual aids with instructors available for individual help.

A complete sequence of Basic Math Review would begin with the first section of Arithmetic and Introduction to Algebra and end with the last section of Geometry and Introduction to Trigonometry. But few students study the entire sequence. The entry point in the sequence is determined by a placement test. The exit point is usually determined by the student's program requirements. All units are available in every scheduled section.

MAT 111 Mathematics, a Liberal Art I

3 Credits

Introduction to the variety and structural beauty of mathematics. Inductive and deductive reasoning, games and number theory, functions and their graphs, large numbers, exponents and logarithms, geometric patterns and symmetry. For Liberal Arts students—recommended for fine arts or humanities majors. Metric units of measure.

3 Class Hours

Prerequisite: Basic Mathematics Review A or equivalent

MAT 112 Mathematics, a Liberal Art II

3 Credits

Introduction to the variety and structural beauty of mathematics. Mathematical curves in nature and science, combinations, permutations and probability, statistics, statistical graphs, misleading uses of statistics, topology and networks. For Liberal Arts students—recommended for fine arts and humanities majors.

3 Class Hours

Prerequisite: Basic Mathematics Review A or equivalent

MAT 114 Statistics

3 Credits

Descriptive statistics, organization and presentation of data, measures of central tendency. Variance, standard deviation, binomial distribution, statistical inference. Random sampling, hypothesis testing, confidence intervals, normal distribution, analysis of variance. Chi-square distribution, students t-distribution, correlation and regression. Formerly MAT 124 Statistics.

3 Class Hours

Prerequisite: Basic Mathematics Review A or equivalent

MAT 117 Elementary Finite Mathematics

with Algebra

4 Credits

Sets, probability, matrix algebra, graphing, inequalities, linear programming.

4 Class Hours

Prerequisite: Basic Mathematics Review A or equivalent

MAT 119 Modern Basic Mathematics I

3 Credits

Algebra of propositions. Algebra of sets. Systems of numeration other than base ten. Properties of the operations of addition and multiplication for the sets of whole numbers, integers and rational numbers. Introduction to number theory. For Liberal Arts Students—recommended for elementary education majors. Formerly MAT 131 Modern Basic Mathematics I.

3 Class Hours

Prerequisite: MAT 003 Basic Mathematics Review B or equivalent

MAT 121 Finite Mathematics

3 Credits

Sets and logic, permutations, combinations and probability, vectors and matrices, inequalities and linear programming. The computer language BASIC is used.

3 Class Hours

Prerequisite: MAT 003 Basic Mathematics Review B or equivalent and CST 110 Introduction to Data Processing. If student has not had CST 110, then CST 100 BASIC may be substituted as a prerequisite or taken concurrently.

MAT 122 Introduction to Calculus

3 Credits

Analytic geometry of line, circle and parabola. Functions and their graphs. Limits and continuity, differentiation—rules and applications, integration—techniques and applications. Exponential and logarithmic functions and applications. Recommended for social science, health science and business students. Not for math majors or science majors in the A.S. degree program.

3 Class Hours

Prerequisite: MAT 139 Algebra or equivalent

MAT 139 Algebra

4 Credits

Real and complex numbers, algebraic operations, functions and graphs, exponents and logarithms, linear and quadratic equations, systems of linear equations, linear inequalities, binomial theorem.

4 Class Hours

Prerequisite: Basic Mathematics Review B or equivalent

MAT 140 Trigonometry

4 Credits

Trigonometric functions and their graphs, solution of triangles, trigonometric identities and equations, inverse trigonometric functions, position vectors, polar representation of complex numbers. DeMoivre's theorem.

4 Class Hours

Prerequisite: MAT 139 Algebra or equivalent

MAT 141 College Algebra and Trigonometry **4 Credits**
A review of algebra and trigonometry emphasizing computational skills and technical applications. Algebraic operations, functions and graphs, exponents and logarithms, linear equations, system of linear equations and determinants. Trigonometry and the solution of triangles, trigonometric functions and their graphs, quadratic equations, vectors, complex numbers. For engineering technology students.
4 Class Hours

MAT 142 Applied Calculus I **4 Credits**
Basic analytic geometry, distance, equations of lines. Limits, continuity and the derivative. Differentiation of polynomials, maxima and minima. Differentials and approximation, applications in kinematics and circuits. The definite integral and applications to finding area, center of gravity, volume of revolution, work done. Approximate integration, differentiating products and quotients, implicit differentiation and related rates, differentiation and integration of logarithmic, exponential, trigonometric and inverse trigonometric functions.
4 Class Hours

Prerequisite: MAT 141 College Algebra and Trigonometry or MAT 140 Trigonometry

MAT 153 Discrete Mathematics I **4 Credits**
Topics from mathematics needed to understand the operation and use of the digital computer. Algebra of sets, product sets. Relations, equivalence relations, partitions, partial ordering. Functions: one-to-one, onto, inverse. Vectors, matrices, matrix algebra, determinants. Systems of linear equations, linear programming, difference equations. Fundamental principles of counting, binomial coefficients, permutations, combinations, ordered partitions, tree diagrams.
4 Class Hours

Prerequisites: CST 115 Pascal and MAT 139 Algebra

MAT 154 Discrete Mathematics II **4 Credits**
Topics from mathematics needed to understand the operation and use of the digital computer. A continuation of MAT 153 Discrete Mathematics I. Graph theory, connectivity, matrices and graphs, trees, rooted trees, directed graphs. Finite state machines, strings. Algebraic systems and formal languages, posets and lattices, propositional calculus, Boolean algebra. (Not offered in 1980-81 academic year).
4 Class Hours

Prerequisites: MAT 153 Discrete Mathematics I

MAT 161 Pre-Calculus Mathematics **4 Credits**
The real number system, inequalities, graphing and the Cartesian Coordinate System, the algebra of functions, polynomial and rational functions, trigonometric functions, inverse functions, exponential and logarithmic functions.
4 Class Hours
Prerequisite: MAT 139 Algebra and MAT 140 Trigonometry or equivalent

MAT 163 Calculus with Analytic Geometry I **4 Credits**
Analytic geometry of lines, conic sections, translations of axes, asymptotes, symmetry. Functions and graphs. Limits and continuity. Differentiation of algebraic functions and applications including motion, related rates, theory of extremes, differentials. Summation, integration and the Fundamental Theorem of Calculus. Integration of polynomials and applications including area, volume, work and arc length.
4 Class Hours

Prerequisite: MAT 161 Pre-Calculus Mathematics or MAT 140 Trigonometry or equivalent

MAT 164 Calculus with Analytic Geometry II **4 Credits**
Differentiation and integration of trigonometric, inverse trigonometric, exponential, logarithmic and hyperbolic functions. Techniques of integration. Vectors and parametric equations. Polar coordinates. Indeterminate forms and L'Hospital's Rule. A brief introduction to infinite series.
4 Class Hours

Prerequisite: MAT 163 Calculus with Analytic Geometry I

MAT 171 Engineering Calculus with Analytic Geometry I **4 Credits**
Absolute value and inequalities, equations of a line and a circle. Limits, continuity, derivatives of algebraic functions, applications to curve sketching, related rates, maxima and minima. Antidifferentiation and applications to the solution of differential equations with variables separate. The definite integral and the Fundamental Theorem of Calculus.
4 Class Hours

MAT 172 Engineering Calculus with Analytic Geometry II **4 Credits**
Applications of the definite integral. Logarithmic, exponential and trigonometric functions. Methods of integration, plane analytic geometry and conic sections. Hyperbolic functions, polar coordinates, indeterminate forms, improper integrals.
4 Class Hours

Prerequisite: MAT 171 Engineering Calculus with Analytic Geometry I

MAT 241 Applied Calculus II **3 Credits**
Integration by substitution, by partial fractions and by parts. Improper integrals, parabola, hyperbola, ellipse and translation of axes. First and second order linear differential equations. Partial derivatives, iterated and double integrals. Polar coordinates, curve plotting and area. Sequences, series, convergence tests, power series and Fourier series.
3 Class Hours

Prerequisite: MAT 142 Applied Calculus I

MAT 243 Differential Equations **4 Credits**
Equations of order one, integrating factors, substitution method, Bernoulli's equation, linear equations of higher order with constant and undetermined coefficients, variation of parameters, inverse differential operators, the Laplace transform.
4 Class Hours

Prerequisite: MAT 241 Applied Calculus II or MAT 164 Calculus with Analytic Geometry II

MAT 246 Applied Linear Algebra **4 Credits**
A non-calculus study of matrices, determinants, vector spaces and linear transformations. (Not offered in 1980-81 academic year).
4 Class Hours
Prerequisite: MAT 241 Applied Calculus II

MAT 252 Mathematical Modeling with The Computer **4 Credits**
Computer techniques for the modeling and solution of mathematical problems. Roots of equations, systems of linear equations, linear programming, iteration and recursion, searching and sorting, stacks, linked lists and trees, numerical integration, mathematical games. The computer language Pascal is used.
4 Class Hours
Prerequisites: CST 115 Pascal and either MAT 164 Calculus with Analytic Geometry II or MAT 172 Engineering Calculus with Analytic Geometry II

MAT 263 Calculus with Analytic**Geometry III****4 Credits**

Sequences, series, power series and radius of convergence. Three dimensional analytic geometry and vectors including equations of lines, scalar products, vector products, equations of planes, cylindrical coordinates. Moments, centroids, and moments of inertia. Partial differentiation, directional derivatives, gradients, maxima and minima. Multiple integrals, volume by multiple integration.

4 Class Hours**Prerequisite:** MAT 164 Calculus with Analytic Geometry II**MAT 264 Linear Algebra****4 Credits**

Linear equations and matrices, real vector spaces, the algebra of linear transformations and matrices, determinants, eigenvalues and eigenvectors.

4 Class Hours**Prerequisite:** MAT 164 Calculus with Analytic Geometry II or**MAT 172 Engineering Calculus with Analytic Geometry II or****MAT 241 Applied Calculus II****MAT 266 Introduction to Higher Mathematics****3 Credits**

Exposure to basic mathematical methods and concepts. Sets, sequences, mappings, convergence. Preparation for analysis, topology and modern algebra.

3 Class Hours**Prerequisite or corequisite:** MAT 263 Calculus with Analytic Geometry III or**MAT 271 Engineering Calculus with Analytic Geometry III or permission of instructor****MAT 271 Engineering Calculus with****Analytic Geometry III****4 Credits**

Solid geometry, lines and planes, vector calculus in space, quadric surfaces, partial differentiation, directional derivatives, gradient, line integrals, multiple integrals, infinite series, complex numbers and functions.

4 Class Hours**Prerequisite:** MAT 172 Engineering Calculus with Analytic Geometry II**MAT 272 Differential Equations with****Linear Algebra****4 Credits**

First order differential equations. Matrices, determinants and solutions of systems of linear equations. Vector spaces, Wronskians, linear transformations and differential operations. Characteristic values and vectors, real symmetric matrices, functions of matrices. Homogeneous and nonhomogeneous linear differential equations with constant coefficients, undetermined coefficients and variations of parameters. Matrix formulation of linear systems of differential equations and solution by characteristic values, the exponential matrix function and nonhomogeneous linear systems. Series solutions of differential equations at ordinary and singular points.

4 Class Hours**Prerequisite:** MAT 271 Engineering Calculus with Analytic Geometry III or MAT 263 Calculus with Analytic Geometry III**MAT 299 Independent Study****1-4 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Department Chairperson Permission**MECHANICAL ENGINEERING TECHNOLOGY****MET 113 Engineering Drawing I****2 Credits**

Basic course that includes lettering, line and instrument exercises, orthographic projection, sketching, dimensioning, auxiliary views, sections, threads, fasteners.

1 Class Hour, 2 Laboratory Hours**MET 114 Engineering Drawing II****2 Credits**

Fits and tolerances, developments and intersections, pictorial drawings, true position dimensioning (ANSI standards), assembly drawings, graphical design using standard industrial parts and descriptive geometry.

1 Class Hour, 2 Laboratory Hours**Prerequisite:** MET 113 Engineering Drawing I**MET 115 Graphics****2 Credits**

Basic course that includes lettering, orthographic projecting, dimensioning, sections, auxiliary views by instrument and free hand. True length, true size, relationships between lines and planes. For Engineering Science students.

1 Class Hour, 2 Laboratory Hours**MET 121 Manufacturing Processes I****3 Credits**

A basic study of manufacturing materials and processes, such as casting metal, production of ferrous and non-ferrous metals and shape changing processes of hot and cold working techniques. Oxyacetylene, arc, resistance welding. Machine tool operation, instrumentation and measurement.

2 Class Hours, 2 Laboratory Hours**MET 122 Manufacturing Processes II****2 Credits**

Abrasives and grinding, indexing, gearing, special machining processes such as numerical control and electrical discharge machining. Advanced elements of machine tool operation including the use of grinding machines, turret lathe, honing, lapping.

1 Class Hour, 3 Laboratory Hours**Prerequisite:** MET 121 Manufacturing Processes I**MET 129 Survey of Engineering Laboratories****3 Credits**

Engineering materials, physical tests and manufacturing processes encountered in mechanical technology laboratories. Lectures, demonstrations and participation in manufacturing processes, casting, welding and forging, metallurgy, strength of materials, fluids and thermodynamics, technical sketching and blueprint reading, scientific calculators. For Secretarial Science students.

2 Class Hours, 2 Laboratory Hours**MET 132 Applied Mechanics****4 Credits**

STATICS: Free body diagram, trusses, friction, centroids, moments of inertia.

DYNAMICS: Motion of particles and bodies without consideration of the forces required to produce or maintain motion (kinematics), unbalanced forces and the motion they produce (kinetics), work and energy, impulse and momentum.

4 Class Hours**Prerequisites:** PHY 141 Physics and**MAT 141 College Algebra and Trigonometry or equivalent or department chairperson approval*****TAUGHT EVENINGS ONLY**

MET 134 Fundamentals of Stationary**Engineering****3 Credits**

A course in general background information in basic topics relating to power plant engineering. Primary emphasis on the operation and maintenance of boiler room equipment including steam cycling-condensing, related mathematics, boiler mountings and bracings, boiler operation, inspection and repair, chemistry of combustion and feedwater treatment. Satisfactory completion of the course is one of the requirements to qualify for the New York State Civil Service Fireman examination.

2 Class Hours, 1 Laboratory Hour**MET 152 Engineering Materials****4 Credits**

Physical and chemical properties of engineering materials. Mechanical tests, structure, phases, relationship and reactions within metallic and non-metallic structure.

4 Class Hours**MET 235 Strength of Materials****3 Credits**

Normal and shear stress and strain, elastic and plastic deformation, torsion, stress in thin-walled cylinders, joints, shear force and bending moment in beams, beam stresses, beam deflection, multi-directional plane stress.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** MET 132 Applied Mechanics**MET 238 Mechanical Design****4 Credits**

An analysis of machine motion and the design of machine elements. Analysis of motion of linkages and mechanisms for displacement, velocity and acceleration relationships. Design and analysis of weldments, fasteners, springs, power screws, couplings, shafts, clutches, gears and bearings.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** MET 235 Strength of Materials**MET 241 Fluid Mechanics****and Thermodynamics****3 Credits**

FLUID MECHANICS: Fluid statics and dynamics, steady flow energy equations, laminar and turbulent flow viscosity and fluid friction, flow measurement.

THERMODYNAMICS: Perfect gas law, specific heats, property and energy relationships in non-flow and steady flow processes for gases, internal combustion engine cycles, nozzles and diffusers, gas turbines.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** MET 132 Applied Mechanics**MET 244 Thermodynamics****3 Credits**

Property and energy relationships in steady flow processes for vapors, power and refrigeration cycles, nozzles and diffusers. Heat transfer in plane and circular geometry, film coefficients, heat exchangers.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** MET 241 Fluid Mechanics and Thermodynamics**MET 245 Energy Conservation****2 Credits**

Emphasis on developing an understanding of energy, its uses and the problems involved with its exploration, conversion and transmission. The influence of energy on man and his environment. A class tour to industries which have energy control devices and energy management programs.

1 Class Hour, 2 Laboratory Hours**MET 246 Refrigeration and Air Conditioning****3 Credits**

Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads, distribution systems, refrigeration systems, cooling load and air conditioning calculations, controls and control systems.

3 Class Hours**Prerequisite:** MET 241 Fluid Mechanics and Thermodynamics**MET 247* Air Conditioning and Refrigeration****3 Credits**

Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads. Thermodynamics and fluid flow concepts essential for satisfactory treatment of the above areas of study.

3 Class Hours**Prerequisite:** PHY 141 Physics**MET 248 Fluid Power****3 Credits**

Static and dynamic fluid force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.

3 Class Hours**Prerequisite:** MET 241 Fluid Mechanics and Thermodynamics**MET 249* Fluid Power****3 Credits**

Fluid statics and fluid dynamics preceding a treatment of static and dynamic force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.

3 Class Hours**Prerequisite:** MET 132 Applied Mechanics**MET 252 Engineering Materials and
Industrial Processes****4 Credits**

Properties, applications and processing of engineering materials including metallic, non-metallic, and composites.

3 Class Hours, 3 Laboratory Hours**Prerequisites:** MET 121 Manufacturing Processes I and
MET 235 Strength of Materials**MET 253* Engineering Materials and
Industrial Processes****3 Credits**

Properties, applications and processing of engineering materials including metallic, non-metallic and composite materials.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** MET 121 Manufacturing Processes I and
MET 235 Strength of Materials**MET 255* Introduction to Plastics Engineering****3 Credits**

Basic concepts of chemical structure and the physical properties of thermoplastic and thermoset materials including additives in plastics, heat transfer and flow behavior of plastic melt, testing and property measurement, processing techniques with emphasis on extrusion and injection molding, defect analysis and troubleshooting, process control and instrumentation, material selection and application, commercial plastics, trade names, suppliers and prices.

3 Class Hours***TAUGHT EVENINGS ONLY**

MET 261 Engineering Statistics and Quality Control**3 Credits**

Measures of central tendency, variance, standard deviation, binomial distribution, normal distribution, statistical inference, hypothesis testing, confidence intervals, chi-square and students t-distribution, correlation and regression, similar elements of statistics as they pertain to engineering problems. Control chart analysis.

2 Class Hours, 2 Laboratory Hours

Prerequisite: MAT 141 College Algebra and Trigonometry or MAT 139 Algebra

MET 272 Automotive Systems**3 Credits**

Functional elements of the automobile. The fuel system, ignition system, the engine cycle, pollution control system, the chassis and basic elements of engine tuneup.

2 Class Hours, 2 Laboratory Hours**MET 280* Management Decisions****2 Credits**

Objective criteria and evaluations in making management decisions. Currently accepted procedures to conceive management models and systems.

2 Class Hours**MET 285* Time, Motion and Wage Study****2 Credits**

Analysis of time spent and methods used for industrial tasks. Relation to wage structure on individual and plant-wide basis.

2 Class Hours

Prerequisite: MAT 139 Algebra

MET 286* Production Control**2 Credits**

Planning, scheduling and routing of goods through a plant from raw materials to finished products. Production control principles, the control of manufacturing processes.

2 Class Hours

Prerequisite: MAT 139 Algebra

MET 287 Plant Layout and Materials Handling**2 Credits**

Plant arrangement as it influences industrial operations. Assembling data, coordinating operations, developing operational layouts, evaluative arrangements. Materials handling requirements, planning and evaluation.

2 Class Hours

Prerequisite: MAT 139 Algebra

MET 295 Seminar**1-3 Credits**

An opportunity for the interested student to become involved with the process of research, formal paper preparation, formal delivery and defense of ideas presented. Also a critical evaluation of ideas set forth by others.

Prerequisite: As established by the Department Chairperson

MET 299 Independent Study**2-3 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Approval of Department Chairperson

MEDICAL LABORATORY TECHNOLOGY**MLT 111 Introduction to Clinical Laboratory****Methods and Practices****2 Credits**

To acquaint the medical laboratory student with the history and scope of clinical laboratory medicine. Responsibility and professional ethics to self, employer, physician and patient. Field trips to clinical laboratory facilities. Basic clinical laboratory procedures and methodologies for urinalysis performed in laboratory sessions.

1 Class Hour, 2 Laboratory Hours**MLT 112 Hematology****3 Credits**

Anatomy and pathophysiology of the blood and hemopoietic tissue. Techniques and procedures for studying and evaluating blood in health and disease. Laboratory work includes specialized hematological techniques and procedures.

2 Class Hours, 4 Laboratory Hours

Prerequisite: MLT 111 Introduction to Clinical Laboratory Methods and Practices or permission of instructor

MLT 211 Clinical Chemistry I**4 Credits**

Principles and methods of analytical clinical chemistry applied to the physiochemical measurements of body function in health and disease. Emphasis on those chemical tests related to excretion, digestion, metabolism and protein synthesis. Laboratory work includes the related chemical tests and specialized analytical instrumentation.

2 Class Hours, 6 Laboratory Hours

Prerequisite: One year general chemistry and one year biology or permission of instructor

MLT 212 Clinical Chemistry II**4 Credits**

A continuation of MLT 211 Clinical Chemistry I. Emphasis on those chemical tests related to liver function, blood gases, pH and electrolyte balance, enzyme, hormones in health and disease. The laboratory work includes the specific related chemical test and specialized analytical instrumentation.

2 Class Hours, 6 Laboratory Hours

Prerequisite: MLT 211 Clinical Chemistry I or permission of instructor

MLT 222 Clinical Physiology**2 Credits**

Emphasis on the utilization of clinical laboratory testing methods in identifying diseases and dysfunction of cellular and body processes. The disordered biochemistry of the disease processes are studied from a case-oriented approach. The case studies cover diseases or dysfunction related to respiration, digestion, circulation, metabolism and excretion.

2 Class Hours

Prerequisite: Senior year status or permission of instructor

***TAUGHT EVENINGS ONLY**

MLT 232 Blood Banking and Serology **3 Credits**
Introduction to blood banking. Blood typing, ABO, Rh, antiglobulin tests, cross-matching, incompatibilities resulting from pregnancies or transfusions. Selected serological diagnostic procedures and principles.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MLT 112 Hematology or permission of instructor

MLT 251 Microbiology II (Diagnostic) **4 Credits**
A continuation of BIO 150 Microbiology I. Emphasis on infectious diseases, communicability, diagnosis and identification of causative organisms, including bacteriology and parasitology.
3 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 150 Microbiology I or permission of instructor

MEDICAL OFFICE ASSISTANT

MOA 102 Medical Assisting Science **2 Credits**
Introduction to medical specialties and problems with related vocations. Responsibility of medical assistant to self, physician and patient. Principles of professional ethics. Professional affiliation. Field trips. For Medical Office Assistant students.
2 Class Hours

MOA 112 Standard First Aid and Personal Safety, Cardio-Pulmonary Resuscitation **1 Credit**
The causes, care and prevention of accidental/emergency life-saving situations. Mastery level of learning for the proficiency of basic skills. Cardio-pulmonary resuscitation prepares students to recognize, evaluate and initiate care for cardiac emergencies. Certification by American Red Cross or American Heart Association.
2 Laboratory Hours

MOA 115 Medical Assisting Procedures **4 Credits**
Clinical procedures of medical assisting in the physician's office. Use and management of diagnostic instruments and equipment. Related patient care, professional ethics and nomenclature. For Medical Office Assistant students.
3 Class Hours, 2 Laboratory Hours
Prerequisite: MRT 105 Medical Terminology or consent of instructor

MOA 201 Medical Assisting Procedures **4 Credits**
Laboratory introduction to microscopic analysis of blood and urine. Also simple blood chemistry tests in medical office. Study of formation of blood cells and urine. For Medical Office Assistant students.
2 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 132 Human Biology II

MOA 206 Medical Office Management **4 Credits**
Medical office administrative procedures, such as accounting principles and practices, patient health records, insurance forms, banking and postal services, payroll records, patient fees and ledger cards, office machines. Mechanics of applicable medical correspondence including letters, manuscripts. Emphasis on letters of inquiry and reply, claims and adjustment, credit and collection. For Medical Office Assistant students.
3 Class Hours, 3 Laboratory Hours
Prerequisites: MOA 102 Medical Assisting Science and MRT 107 Medical Transcription

MOA 208 Medical Law, Ethics and Economics **3 Credits**
Emphasizes the medical ethics which set the standards of conduct for physicians, as well as guidelines for medical assistants. Requirements to practice medicine, legal liabilities of the profession, and the importance of medicolegal consent forms. Various types of medical practices, fee determination, health insurance programs, and systems of health care delivery.
3 Class Hours

MOA 210 Pharmacology **2 Credits**
A practical course relevant to medical curriculums. Emphasizes knowledge of prescriptions and prescription writing. Basic principles of mathematics of pharmacy. Drugs governed by U.S.P. standards which are in common use and their generic-pharmaceutical relationship. Drug grouping and action relevant to human physiology. For Medical Office Assistant and Medical Record Technology students.
2 Class Hours
Prerequisite: BIO 132 Human Biology II

MOA 211 Medical Assisting Procedures **4 Credits**
Advanced technical procedures in medical assisting specifically oriented to the various medical specialties. Techniques of electrocardiography, audiometry and physical therapy. Field trips and practical experiences give additional background outside of the classroom. For Medical Office Assistant students.
2 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 132 Human Biology II

MOA 245 Directed Practice **5 Credits**
Directed practical experience in the physician's offices, medical centers, school health departments, rehabilitation clinics, and other health care institutions, weekly seminars. For Medical Office Assistant students.
1 Class Hour, 16 Laboratory Hours
Prerequisites: MOA 206 Medical Office Management and MOA 211 Medical Assisting Procedures.
MOA 201 Medical Assisting Procedures and MOA 210 Pharmacology must be taken previously or concurrently

MEDICAL RECORD TECHNOLOGY

MRT 101 Medical Record Science **3 Credits**
Introduction to the history of medicine and the historical development of the health care field, with emphasis on the organizational structure of health institutions. Functions of a medical record department and overview of the professional association. Definition of, standards for, and development of a medical record as to content, format, evaluation and completion. A comprehensive review of the organization of the medical staff.
2 Class Hours, 2 Laboratory Hours

MRT 105 Medical Terminology I **2 Credits**
Medical terminology as correlated with anatomical systems. Suffixes, prefixes, root words and use of the medical dictionaries. For Medical Office Assistant and Medical Record Technology students.
2 Class Hours

MRT 107 Medical Transcription **2 Credits**
Designed to introduce the student to the knowledge and skills required for medical machine transcription in a health care facility. A practical experience in transcribing including proper format and a variety of medical reports.

4 Laboratory Hours
Prerequisite: MRT 105 Medical Terminology I

MRT 110 Medical Record Science **4 Credits**
A study and application of the Problem Oriented Medical Record System. Purpose of classifying diseases and operations, difference between and historical development of nomenclature and classification systems. Value and use of indexes and registers. Numbering and filing systems and methods. Storage and retrieval systems.

2 Class Hours, 4 Laboratory Hours
Prerequisite: MRT 101 Medical Record Science

MRT 115 Medical Terminology II **2 Credits**
A continuation of MRT 105 Medical Terminology I. Emphasis on terminology associated with the integumentary, musculoskeletal, nervous, special senses, cardiovascular, digestive, respiratory, genito-urinary and endocrine systems.

2 Class Hours
Prerequisite: MRT 105 Medical Terminology I

MRT 144 Directed Practice **4 Credits**
Directed summer practical experience in the hospital medical record department. Development of insight and skills into the basic medical record procedures. Graduation requirement.

40 Laboratory Hours per week for 4 Weeks
Prerequisite: MRT 110 Medical Record Science

MRT 202 Medical Record Science **3 Credits**
In-depth study of the Tumor Registry. Overview of ambulatory care, long term care and psychiatric facilities. In-depth treatment of basic hospital and vital statistics and application of the same.

2 Class Hours, 2 Laboratory Hours
Prerequisites: MRT 110 Medical Record Science and BIO 132 Human Biology II

MRT 208 Advanced Medical Transcription **2 Credits**
Review of medical terminology emphasizing specialized terminology. Advanced medical transcription techniques through the use of recorded history and physical examinations, discharge summaries, consultation reports, operative reports and outpatient notes.

1 Class Hour, 2 Laboratory Hours
Prerequisite: MRT 107 Medical Transcription

MRT 210 Medical Record Science **3 Credits**
Principles of management and the role of the supervisor in the medical record department. Developmental and operational phase of health information systems. Trends in health care delivery systems.

2 Class Hours, 2 Laboratory Hours
Prerequisite: MRT 202 Medical Record Science

MRT 216 Clinical Practicum **1 Credit**
Enables the students to utilize the knowledge and skills obtained in the classroom and directed practice assignments. Students perform the functions of an actual medical record department and use the computer terminal, microfilm equipment and medical transcription word processing center.

2 Laboratory Hours
Prerequisites: MRT 110 Medical Record Science and MRT 144 Directed Practice

MRT 222 Medical Legal Aspects **3 Credits**
Introduction to legal aspects of medical records. Legal basis for medical practice, confidentiality. Patient's "Bill of Rights," voluntary and involuntary release of medical information. Authorizations and consents, professional liabilities, medical-moral issues such as abortion, euthanasia, sterilization, artificial insemination.

3 Class Hours
Prerequisite: MRT 110 Medical Record Science

MRT 236 Medical Care Evaluation **2 Credits**
Three components of medical care evaluation—admission, concurrent review and retrospective review of patient records, audited by the medical record technician. Federal and state regulations.

2 Class Hours, 1 Laboratory Hour
Prerequisite: MRT 110 Medical Record Science

MRT 245 Directed Practice **4 Credits**
Directed practice experience in the hospital and related affiliation sites. Correlated with MRT 210 Medical Record Science to develop insight and skills into advanced medical record procedures.

16 Laboratory Hours
Prerequisites: MRT 202 Medical Record Science and MRT 144 Directed Practice

MRT 295 Medical Record Seminar **2 Credits**
Detailed study and analysis of specific problems encountered in the administration of a medical record department. Correlated with directed clinical practice. Case study and extensive literature review.

2 Class Hours

MUSIC

MUS 101 Fine Art: Introduction to Music **3 Credits**
Basic elements of music common to all forms of musical expression. Emphasis on developing listening habits, which bring the student to an informed awareness and understanding of music. Attendance at concerts and recitals.

3 Class Hours

MUS 105 Music Theory I **3 Credits**
A beginning course in music theory, including basic rudiments of music. Pitch and rhythmic notation, scales and intervals. Ear training through melodic and rhythmic drills and dictation.

3 Class Hours

MUS 106 Music Theory II **3 Credits**
Continuation of Music Theory I. Traditional harmony, exercises in melodic, rhythmic and harmonic dictation, aural analysis, beginning composition.
3 Class Hours
Prerequisite: MUS 105 Music Theory I or consent of instructor

MUS 110 17th and 18th Century Music **3 Credits**
Music and musical styles of the 17th and 18th Centuries. Emphasis on the composers and their styles and the relationship of music to the social, political and other cultural reforms of the period.
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 111 19th Century Music **3 Credits**
Important musicians and musical styles of the Romantic Period. Emphasis on developments in piano literature, the symphony orchestra and opera. Listening to selected recordings and attendance at local concerts.
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 112 20th Century Music **3 Credits**
Important musicians and musical styles in the 20th Century. Emphasis on the trends and development of music in America. Leading European composers.
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 190 The College Choir **1 Credit**
Students who sing in the College Choir receive one credit per semester. See page 25.

MUS 191 Broome Community College Music Performance **1 Credit**
Students who participate in the recitals or concerts of the academically-associated Broome Community College Music Performance groups receive one credit per semester. See page 25.

MUS 299 Independent Study: Music **1-3 Credits**
An individual student project concerned with advanced work in a specific area of music. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in music

NURSING

A Grade of "C" or Better Is Required to Pass Each Nursing Course

ADN 100 Meeting Basic Human Needs **7 Credits**
Introduction to nursing concepts and principles. The total human being incorporating biophysiological and psychosocial components. Emphasis on maintaining homeostasis within the illness/wellness continuum. The needs approach, based on Maslow's Hierarchy of Human Needs, is emphasized. Skills in providing safe bedside nursing care, such as simple treatments, pharmacology and basic nutrition. In-

tegrating knowledge of communication skills, nursing process, problem solving, mental mechanisms, normal responses to stress, crisis intervention, body responses to pathology. Adaptation of nursing intervention directed toward meeting basic needs of the chronically ill, the aging and those individuals facing death.
5 Class Hours, 6 Laboratory Hours

ADN 101 Nursing Care During the Life Cycle **7 Credits**
The Life Cycle from conception to middle-age. Correlating basic human needs and the developmental tasks in each age group. The family cycle, as one of the tasks of the young adult. Emphasis on preparation for parenthood, the experience of parenthood, and the psychosocial implications of the young family. Learning principles identified and incorporated into the nursing process. Situational and maturational crises as normal aspects of the life cycle. Adaptation of nursing intervention directed toward meeting basic needs of the middle aged. Nursing intervention for diagnostic testing.
5 Class Hours, 6 Laboratory Hours
Prerequisites: ADN 100 Meeting Basic Human Needs

ADN 203 Immobility Concepts **4 Credits**
The nursing process as it meets the needs of individuals experiencing complex physiological and psychological problems due to immobility. Concepts of neurological, orthopedic and sensory deprivation nursing. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
(Half Semester)
5 Class Hours, 9 Laboratory Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 204 Regulatory Concepts **4 Credits**
The nursing process is applied to the needs of individuals with disturbances of the regulatory physiological mechanisms. Content includes nursing concepts of stress, fluids and electrolytes, endocrinology. Related health behavior and teaching. Extended campus laboratory experience is correlated. Successful achievement in the extended laboratory is required.
(Half semester)
5 Class Hours, 9 Laboratory Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 205 Psychological Concepts I **2 Credits**
The nursing process as it meets the needs of individuals experiencing psychological stress. Psychiatric nursing concepts applied to behavioral disturbances. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
1 Class Hour, 3 Clinical Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 206 I, I and O Concepts**4 Credits**

The nursing process as it meets the needs of individuals with complex physiological and/or psychological stress due to problems of inflammation, infection and obstruction. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

(Half semester)

5 Class Hours, 9 Clinical Hours**Prerequisites:** ADN 101 Nursing Care During Life Cycle, ADN 203**Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205****Psychological Concepts I, BIO 132 Human Biology I and BIO 150 Microbiology.****ADN 207 Oxygenation Concepts****4 Credits**

The nursing process is applied to needs of individuals experiencing disturbances of oxygenation. Broad concepts applied to problems of the hemopoietic, respiratory, vascular and cardiac systems. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

(Half semester)

5 Class Hours, 9 Clinical Hours**Prerequisites:** ADN 101 Nursing Care During Life Cycle, ADN 203**Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205****Psychological Concepts I and BIO 132 Human Biology II.****ADN 208 Psychological Concepts II****2 Credits**

Continued application of the nursing process as it meets the needs of individuals experiencing psychological stress. Content includes psychiatric concepts applied to behavioral changes. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

1 Class Hour, 3 Laboratory Hours**Prerequisites:** ADN 101 Nursing Care During Life Cycle, ADN 203**Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205****Psychological Concepts I and BIO 132 Human Biology II.****ADN 296 Nursing Seminar I****1 Credit**

Seminar discussions and role playing exercises explore, in detail, decision making, values clarification and the setting of priorities within the context of clinical nursing situations. Emphasis on clinical accountability and the management of multiple patient care situations.

2 Seminar Hours**Prerequisites:** Successful completion of all previous program requirements**ADN 297 Nursing Seminar II****1 Credit**

A broad survey course examining the effects of a changing society upon the delivery of health care. Licensure and nursing practice issues. The National League for Nursing achievement tests used as a guide for the individuals' preparation for licensure.

2 Seminar Hours**Prerequisites:** Successful completion of all previous program requirements**ADN 298 Nursing Practicum****2 Credits**

Emphasis during the clinical practicum on the application of the concepts explored in Nursing Seminar I in selected clinical placements (days, evenings or nights) under the guidance of an assigned preceptor. This experience is designed to facilitate the role change transition from student to potential employee.

40 Clinical Hours for two weeks**Prerequisites:** Successful completion of all previous program requirements and of the assigned Clinical Laboratory Proficiency examination**PARALEGAL ASSISTANT****PLA 100 Introduction to Paralegal Profession I****3 Credits**

Local, state and federal courts, introduction to jurisprudence and administrative agencies and their functions and procedures. Introduction to contract, tort, negligence, criminal, criminal procedure and real property law. Legal terminology. (Formerly LGS 100).

3 Class Hours**PLA 101 Introduction to Paralegal Profession II****3 Credits**

Role of the paralegal and the lawyer, with emphasis on the duties and obligations of each, including management, accounting, records, documents, equipment and research techniques. Legal terminology. (Formerly LGS 101).

3 Class Hours**PLA 102 Introduction to Paralegal Profession III****3 Credits**

Comprehensive study of family, surrogate, wills and estates, agency and partnership, bankruptcy, corporate law, commercial paper and workmen's compensation law, including procedures and practices of each. Legal terminology. (Formerly LGS 102).

3 Class Hours**PLA 200 Real Property Law****3 Credits**

Comprehensive survey of law of real property emphasizing practical application to a paralegal function. Analysis of forms of deeds, bonds, notes, mortgages, assignments, discharges, purchase of contracts, leases, options. Training in searching title, basic understanding of abstracts of title, real property litigation, estates, condemnation and foreclosure.

3 Class Hours**PLA 205 Techniques of Research****3 Credits**

Development of research skills through the use of digests, encyclopedias, reporter systems and practice manuals. Arrangement, use and maintenance of a law library (including the Supreme Court Library). All legal references, for assistance in diverse phases of law and the operation of those agencies and institutions. (Formerly LGS 200).

3 Class Hours**Prerequisite:** PLA 100 or 101 or 102 Introduction to Paralegal Profession or 2 years experience in a law office.**PLA 210 Legal Drafting****3 Credits**

Analysis of legal documents for writing style, clarity of meaning, conciseness, various types of composition of formal and informal letter writing, memos, reports. Refinement of basic communication skills.

3 Class Hours**Prerequisite:** ENG 110 Written Expression I

PLA 215 Estates, Probates and Trusts**3 Credits**

Disposition of decedent's property, law of intestate succession, execution and probate of wills, nature and creation of trusts and the administration of estates and trusts, estate and gift tax preparation.

3 Class Hours**PLA 220 Contracts****3 Credits**

The law of contracts, their historical significance, formation, validity, interpretation, transfer of contractual rights. Assignment, third party beneficiaries, discharge, breach and remedies. (BUS 118 Business Law I may be substituted. Not offered in 1980-81 academic year).

3 Class Hours**PLA 230 Domestic Relations****1 Credit**

The marriage contract, spouses' rights and obligations, void marriage, voidable marriage, annulment, separation, divorce, support, alimony and custody of children.

1 Class Hour**PLA 240 Corporate Law****1 Credit**

Types, uses and organization of the corporation, antitrust and securities law, mergers and consolidation, liquidation and dissolution.

1 Class Hour**PLA 250 Municipal Law****1 Credit**

Structure and operations of local government in New York State. Evolution of local government in New York during the first two centuries of its existence. Laws, ordinances and operations.

1 Class Hour**PLA 260 Labor-Management Relations****(Labor Law)****1 Credit**

Labor-management relations in the public and private sectors. Taft-Hartley Act, National Labor Relations Act and Wagner Act, unfair labor practices, labor contracts, arbitration and mediation, availability of injunctions in labor disputes.

1 Class Hour**PLA 270 Vehicle and Traffic Law****1 Credit**

Regulations of traffic within the State of New York. Emphasis on violations and traffic-related misdemeanors resulting from violation of the rules of the road and court proceedings resulting therefrom.

1 Class Hour**PLA 280 Litigation and Trial Preparation****1 Credit**

Intake procedures, systems and analysis, concepts of jurisdiction and venue, parties to an action, pleadings, pre-trial procedures, motions and special practice, special proceedings, trials, judgments and appeals.

1 Class Hour**PLA 299 Independent Study: Paralegal****1-3 Credits**

An individual student project in paralegal studies which is beyond the scope or requirements of the courses offered by the program. Conducted under the direction of a faculty member or attorney, and approved by the program coordinator.

Prerequisites: PLA 100, 101, 102 Introduction to Paralegal**Profession I, II, III plus three additional hours in a 200 level PLA course****PHILOSOPHY****PHI 101 Philosophical Problems****3 Credits**

Basic problems of philosophy, such as *a priori* knowledge, the reality of the physical world, morality, the mind-body relationship, freedom and the supernatural.

3 Class Hours**PHI 102 Introduction to Philosophy****3 Credits**

Meaning of philosophy, suggestions for reading philosophy, informal logic, methodology and basic philosophical terms including idealism, dualism, naturalism.

3 Class Hours**PHI 103 Philosophy of Mind****3 Credits**

Theories of major philosophers as to the nature and limits of human knowledge and the nature of reality. Problem of knowledge of the physical world, the mind-body problem, free-will problem, existentialist's view of man. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours**PHI 104 Philosophy of Religion****3 Credits**

Relation of religion and philosophy and an investigation of different concepts of God. Analysis of religious types and experiences, different attempts to justify religious beliefs. Investigation of the logic of religious experience through an analysis of the leading ideas in the philosophy of religion both as an historical and contemporary phenomenon. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours**PHI 111 Humanities****3 Credits**

Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Classical, Medieval, Renaissance and Metaphysical Periods.

3 Class Hours**PHI 112 Humanities****3 Credits**

Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Neoclassical, Romantic, Victorian, Early Modern and Late Modern Periods.

3 Class Hours**PHI 120 Verbal Reasoning****3 Credits**

To improve the students' ability in reasoning. Concentration on qualification, symbols, ambiguity, analysis and semantics. (Not offered in 1980-81 academic year).

3 Class Hours**PHI 201 Ethics: Moral Philosophy****3 Credits**

Main classical and modern ethical theories, including such theorists as Plato, Aristotle, Spinoza, Mill, Kant, Moore, Toulmin, Ayer, Westermarck. Comparison and contrast of normative and meta-ethical theories, the good life and how one should act, the meaning of moral judgments and the criteria of validity, justification of moral beliefs and the grounds of moral responsibility. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours

PHI 202 Logic

Analysis and practical application of the elements of logic as they apply to thinking on both a linguistic and formal level. Forms of argument, informal and formal fallacies, significance of the emotions on decision making, inductive and deductive processes. Symbolizing arguments and formal proofs of validity.

3 Class Hours

Prerequisite: Any Philosophy (PHI) course or any mathematics (MAT) course numbered MAT 139 or higher

3 Credits

**PHI 203 Philosophical Issues
in American Education**

Philosophy of selected American educators, with attention on the historical development of the American educational system. Brief review of educational outlooks from antiquity to the present, including Plato, Aristotle, Rousseau. Analysis of educational issues and of key terms in education from philosophical perspective. The nature of the individual, the school and society and the underlying philosophical interrelations that may exist. PHI 102 Introduction to Philosophy recommended as a prerequisite. (Not offered in 1980-81 academic year).

3 Class Hours

3 Credits

**PHI 204 Comparative Religions: Living
Religions of the East**

Survey of the major religions of the Eastern societies. Comparison of their similarities and differences. Focus on the contributions of religion to society in everyday living, and its influence on thinking, culture and arts. Areas covered are primitive religions, the religions of India, Persia, Indochina, China, Japan. (Not offered in 1980-81 academic year).

3 Class Hours

3 Credits

**PHI 205 Comparative Religions: Living
Religions of the West**

Survey of the major religions of the West. An examination of central beliefs, such as the belief that God is a Personal God and that there is life after death. Comparison made of their similarities and differences. Focus on the contributions of religion to society in everyday living, and its influence on the thinking, culture and arts of Western society. Areas covered are Zoroastrianism, Judaism, Christianity and Islam. (Not offered in 1980-81 academic year).

3 Class Hours

3 Credits

PHI 206 Social and Political Philosophy

A philosophical study of the social/political organization of society through an examination of such topics as justice, authority, leadership, individual rights, and of the relationship between the state and various social institutions, such as family, business, church, and education.

3 Class Hours

3 Credits

PHI 299 Independent Study: Philosophy

An individual student project concerned with advanced work in a specific area of philosophy. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in philosophy

1-3 Credits

PHYSICAL EDUCATION

Practically all of the Physical Education courses are half a semester in length. For the most part, the courses that take place outdoors are given in the first half of the fall semester or the second half of the spring semester; those courses that occur indoors are given in the second half of the fall semester or the first half of the spring semester.

PED 100 Archery

Fundamentals of shooting—seven-step approach. Proper target shooting technique and form stressed.

4 Class Hours, 11 Laboratory Hours per half semester

½ Credit

PED 103 Back Packing

Designed to prepare students for a camping experience inaccessible by auto. The art of being self-sufficient with everything on your back. A three-day campout on the trail. Lightness stressed by eliminating all unnecessary items and utilizing lightweight food, shelter, sleeping bag and cooking equipment.

15 Class Hours, 15 Laboratory Hours per semester

1 Credit

PED 106 Badminton

Instruction and practice in the various strokes. Rules, terminology and equipment. Strategy for singles and doubles.

4 Class Hours, 11 Laboratory Hours per half semester

½ Credit

PED 109 Basketball

Instruction and practice in the fundamental skills of passing, dribbling, shooting and defense. History, rules, tactics, and team play. Basketball as a carry-over sport. (Not offered in 1980-81 academic year).

4 Class Hours, 11 Laboratory Hours per half semester

½ Credit

PED 112 Bowling

Bowling fundamentals including ball selection, grip, stance, approach and delivery. Etiquette, scoring, correction of basic mistakes in delivery. Classes are at off-campus site and students must pay for own games, shoe rental and transportation.

3 Class Hours, 12 Laboratory Hours per half semester

½ Credit

PED 115 Circuit Training and Conditioning

Individualized program on weight machine. Student is pre-tested to determine starting level. Principles of training, components of fitness and proper technique.

3 Class Hours, 12 Laboratory Hours per half semester

½ Credit

PED 118 Field Hockey

Basic skills needed for good competition in game situations. Emphasis on rules and responsibilities of each position on the team. Organized competition within the class. (Not offered in 1980-81 academic year).

4 Class Hours, 11 Laboratory Hours per half semester

½ Credit

PED 121 Golf

Skills, rules, etiquette and strategy. Field trips to a driving range and/or par-3 golf course, with students providing their own transportation and fees. Advanced students to play on a regulation course, providing their own transportation, greens fees and clubs.

4 Class Hours, 11 Laboratory Hours per half semester

½ Credit

PED 127 Jogging**½ Credit**

Jogging as a possible leisure time activity. Physiological and psychological benefits, improvement of technique and basic principles of training. Individual works at own level and sets own goals. Distance usually worked: 2 miles.

3 Class Hours, 12 Laboratory Hours per half semester

PED 142 Skiing**½ Credit**

Instruction and practice in all phases of skiing (beginning through advanced). Conduct, terminology, safety and equipment. Basic racing technique demonstrated and practiced where sufficient skill level and interest are indicated. Classes at an off-campus site; students must pay necessary fees and provide their own transportation.

3 Class Hours, 12 Laboratory Hours per half semester

PED 143 Ski Touring**½ Credit**

Instruction and practice in cross-country skiing—beginning through advanced. Conduct, terminology, safety and equipment. Classes both on and off campus. Skis, poles, bindings provided; students responsible for boots and transportation.

3 Class Hours, 12 Laboratory Hours per half semester

PED 145 Slimnastics**½ Credit**

Exercises for all muscles of the body. Duration of each exercise and number of exercises used during the class hour gradually increased. Music used for intensive exercise routines.

4 Class Hours, 11 Laboratory Hours per half semester

PED 148 Soccer**½ Credit**

Instruction and practice in the fundamental skills of kicking, tackling, trapping, dribbling and heading. Rules and tactics. Team competition.

4 Class Hours, 11 Laboratory Hours per half semester

PED 154 Speedball**½ Credit**

A combination team sport involving skills common to soccer, basketball and football. Development of skills, rules and strategy of the game. Speedball is a fast moving, quick thinking game.

4 Class Hours, 11 Laboratory Hours per half semester

PED 169 Tennis**½ Credit**

Instruction and practice in the basic strokes—forehand, backhand, serve and volley. Rules, terminology and equipment. Strategy for singles and doubles.

4 Class Hours, 11 Laboratory Hours per half semester

PED 172 Volleyball**½ Credit**

A basic course in the fundamentals of power volleyball. Team strategy, history and rules. Drills and competitive play.

4 Class Hours, 11 Laboratory Hours per half semester

PED 175 Weight Training**½ Credit**

Individualized work on weight machine. Student selects activities along with instructor's guidance. Emphasis on improvement of weaknesses and a balanced approach. Physical fitness, principles of training. (Not offered in 1980-81 academic year).

3 Class Hours, 12 Laboratory Hours per half semester

PED 299 Independent Study**½ or 1 Credit**

Student undertakes a project of own choice with guidance from faculty member. The project is intended for a student who has completed requirements.

Prerequisite: 2 Semester Hours in Physical Education

PHYSICAL SCIENCE**PHS 111 Physical Science for Today****3 Credits**

Beginnings of astronomy, the earth and moon, planets and satellites, the sun and other stars, cosmology. Chemistry of our atmosphere, weather and methods of modification, water cycle and pollution. Composition of the earth's crust, erosional processes, earthquakes and volcanoes, plate tectonics, nuclear radiation, man and his environment. Required field trips supplement classroom experience.

2 Class Hours, 2 Laboratory Hours

PHS 113 Physical Science—Astronomy**4 Credits**

The Copernican and Ptolemaic models of the solar system. The planets, sun, moon and comets. Stellar magnitudes and evolution of stars. The size and age of the universe and modern developments in astronomy and cosmology. Required field trips supplement classroom experience.

3 Class Hours, 3 Laboratory Hours

Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHS 115 Physical Science—Geology**4 Credits**

Crystals, minerals, rocks—their structure and identification. Erosion of the crust, its uplift and deformation. Earthquakes and the interior of the earth, geologic dating and the physical history of the earth. Plate tectonics and continental drift, ecology from a geologic viewpoint. Required field trips supplement classroom experience.

3 Class Hours, 3 Laboratory Hours

Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHS 116 Physical Science—Environment**4 Credits**

Basic physical principles and the role of these principles in understanding and appreciating the problems of the environment. Problems of pollution and depletion of natural resources. Application of physics in the everyday world. Required field trips supplement classroom experience.

3 Class Hours, 3 Laboratory Hours

Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHYSICS**PHY 100, 101 Preparatory Physics I and II****4, 4 Credits**

Composition and resolution of vectors. Statics and dynamics. Conservation laws, wave motion, sound and light. Thermodynamics, electricity and magnetism. The physics of the atom.

4 Class Hours each

Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHY 117 Physics**3 Credits**

Vectors, linear motion, energy, momentum, electric fields, potential difference, Ohm's law, d-c circuits, motion of charges in magnetic fields, electromagnetic induction. Mirrors and lenses, nature of light, atomic structure, production of X-rays, radioactive decay, nuclear reactions, interaction of radiation with matter, radiation detection, radiation protection standards.

2 Class Hours, 2 Laboratory Hours

Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHY 141 Physics**4 Credits**

Composition and resolution of vectors, forces in equilibrium, moments of forces, elasticity, linear and projectile motion, forces and motion, rotation, work and energy, impulse and momentum, harmonic motion, fluid mechanics, temperature, thermal expansion, heat. For Engineering Technology students.

3 Class Hours, 2 Laboratory Hours**Corequisite: MAT 141 College Algebra and Trigonometry or equivalent****PHY 142 Physics****4 Credits**

Thermodynamics, thermal properties of gases, wave motion and sound, electrostatics, direct current, magnetism, electromagnetic induction, alternating current, electromagnetic radiation, illumination, reflection and refraction of light, mirrors and lenses, optical instruments, diffraction, nuclear energy. For Engineering Technology students.

3 Class Hours, 2 Laboratory Hours**Prerequisite: PHY 141 Physics****PHY 144 Physics II-E****4 Credits**

Thermodynamics, wave motion and sound, photometry, reflection, refraction, dispersion, light, mirrors and lenses, optical instruments, diffraction, lasers, electrostatics, potential, current, resistance, magnetism, semiconductor theory. For Electrical Technology students.

3 Class Hours, 2 Laboratory Hours**Prerequisite: PHY 141 Physics, EET 121 Electrical Circuits****PHY 161 Physics****4 Credits**

Structure and language of physics. Standard units of measurement of length, mass and time. Basic mathematical foundation: elementary trigonometry, vector algebra, powers of ten and significant figures. Mechanics: motion, Newton's Laws, work, energy and momentum principles, rotation. Waves and wave phenomena, mirrors and lenses, optical instruments, sound. First course in an introductory non-calculus sequence. For Liberal Arts students who need a laboratory science.

3 Class Hours, 3 Laboratory Hours**Prerequisite: MAT 141 College Algebra and Trigonometry or equivalent****PHY 162 Physics****4 Credits**

Concepts of heat and temperature, kinetic theory, thermodynamics. Electricity and magnetism: electrostatics, electrical circuits, electromagnetic phenomena. Modern physics: relativity, quantum theory, atomic structure radioactivity. Second half of introductory physics course for Liberal Arts students who need a laboratory science.

3 Class Hours, 3 Laboratory Hours**Prerequisite: PHY 161 Physics****PHY 181 Engineering Physics I****4 Credits**

Vectors, equilibrium, kinematics, Newton's Laws of Motion, centripetal force, work and energy, impulse and momentum, rotation, elasticity, harmonic motion, hydrostatics and hydrodynamics.

3 Class Hours, 2 Laboratory Hours**Corequisite: MAT 163 Calculus with Analytic Geometry I or MAT 171 Engineering Calculus with Analytic Geometry I****PHY 182 Engineering Physics II****4 Credits**

Relativistic mechanics, Coulomb's Law, electrostatic field, potential, capacitance, direct currents, magnetic force on currents, magnetic field of a current, induced emf, inductance, alternating currents.

3 Class Hours, 2 Laboratory Hours**Prerequisite: PHY 181 Engineering Physics I****Corequisite: MAT 164 Calculus with Analytic Geometry II or MAT 172 Engineering Calculus with Analytic Geometry II****PHY 281 Engineering Physics III****3 Credits**

Wave motion, sound, temperature, calorimetry, heat transfer, elementary thermodynamics, kinetic theory, geometrical optics, optical parts and instrumentation, physical optics, interferometry and polarization.

3 Class Hours**Prerequisites: 1 year of calculus and PHY 181 Engineering Physics I or equivalent****PHY 282 Engineering Physics IV****3 Credits**

Quantum description of waves and particles, Bohr's model of atomic structure, Schrodinger's equation, X-rays, quantization of angular momenta, atomic spectra, introduction of solid state physics, nuclear radiation detection instruments, nuclear force, binding energy of stable nuclei, radioactive decay, low energy nuclear reactions, neutrons, fission, fusion.

3 Class Hours**Prerequisites: 1 year of calculus and PHY 182 Engineering Physics II****POLITICAL SCIENCE****POS 201 Introduction to American Government****3 Credits**

American political institutions, processes and behavior. The relationships among cultural, legal and social aspects of the political system. Structure, organization and function of political parties, pressure groups and mass media. Application to contemporary issues and events.

3 Class Hours**POS 203 International Relations****3 Credits**

Basic concepts and principles of world politics. International conflict resolution, international organizations, the struggle for power. Factors affecting the relationships among the major powers. Role of diplomacy, alliances, war and peace in the world arena.

3 Class Hours**POS 204 American State and Local Government****3 Credits**

Theory and practice of state and local government, utilizing a problem-solving or "policy" approach. Students are encouraged to explore in depth the workings of city and county governments locally.

3 Class Hours**POS 299 Independent Study****1-3 Credits**

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson.

Prerequisite: 3 semester hours of political science**PSYCHOLOGY****PSY 100 Psychology of Personal Adjustment****3 Credits**

Investigation of bio-cultural factors which influence human behavior and study of the development of well-adjusted personality. Attention is directed to the learning and thinking the individual employs in solving personal problems in everyday living. (This course cannot be used as a prerequisite for other psychology courses.)

3 Class Hours

PSY 103 Psychology of Adulthood**3 Credits**

Investigation of the continuity-change pattern that characterizes normal adulthood (20 to 60 years). Identification of individual responses to life crises. Introduction to skills that facilitate meeting self-selected goals and skills that assist others to fulfill their goals.

3 Class Hours**PSY 110 General Psychology****3 Credits**

Definition and description of psychology. Functions of the neural system, sensation and perception, learning, memory, motivation, emotion, conflict and frustration, personality, social psychology. Methods and statistical applications, history and fields of psychology.

3 Class Hours**PSY 211 Child Development****3 Credits**

The growth, maturation and development of children, including mental and motor phases, learning, motivation and personality formation.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 212 Adolescent Development****3 Credits**

The adjustment processes necessary for the child to become an adult. Development of socialization, personal goals and enlargement of self-concept. Formative influences of social institutions and environmental elements relative to the growth of the individual.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 214 Abnormal Psychology****3 Credits**

Description and criteria for normal and abnormal personality. Dynamic processes of adjustment, the coping process. Definition and description of sociopathic, psychopathic, neurotic and psychotic behavior. Development of both functional and organic disorders.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 217 Counseling and Interviewing****3 Credits**

Varied methods of interviewing and counseling, group dynamics employing current theories, situational examples and means for determination of method to be used. Practical cases in social services, clinics, hospitals and educational institutions. Overall training and personality of the counselor.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 223 Intelligence and the Mentally Retarded****3 Credits**

The several meanings of the concept of intelligence, distribution of intelligence in populations, development and organization of intelligence at different levels, concepts of retardation. The various levels and causations of retardation, development at all chronological ages, learning and employment expectations, methods of assisting with behavioral improvement, cooperative social agencies.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 227 Behavior Modification****3 Credits**

Principles of behavior modification using classical and operant techniques. Practical applications of these principles to the fields of child care, psychotherapy and correctional institutions.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 299 Independent Study****1-3 Credits**

An individual student project in psychology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

Prerequisite: PSY 110 General Psychology plus 3 additional hours in a 200 level PSY course

RADIOLOGIC TECHNOLOGY**RAD 100 Introduction to Radiologic Technology****2 Credits**

Part I Overview of radiologic technology through the study of its historical development, its placement in the medical field today, the organization of a modern radiology department, professional ethics, and medicolegal aspects of radiology. **Part II** Introduction and orientation to the radiology department in an affiliated hospital.

First half semester, 2 Class Hours**Second half semester, 16 Laboratory Hours****RAD 101 Radiologic Technology I****3 Credits**

A modular approach to radiation protection, recording media, film processing, radiographic quality, radiographic accessories.

3 Class Hours, 1 Laboratory Hour**RAD 102 Radiologic Technology II****3 Credits**

A modular approach to radiologic mathematics, advanced study of radiographic quality, preparation of technique charts, sensitometry and portable radiography.

3 Class Hours**Prerequisite:** RAD 101 Radiologic Technology I or permission of instructor**RAD 103 Positioning I****1 Credit**

Instruction and practice in radiographic positioning of the appendicular skeleton, chest and abdomen.

3 Laboratory Hours**RAD 104 Positioning II****1 Credit**

Instruction and practice in radiographic position of the axial skeleton.

3 Laboratory Hours**Prerequisite:** RAD 131 Clinical Education I**RAD 110 Methods of Patient Care****2 Credits**

Patient care procedures routinely used in the department of radiology. Understanding the basic procedures utilizing contrast media. Basic medical terminology for the student radiographer.

1 Class Hour, 2 Laboratory Hours**RAD 131 Clinical Education I (Winterim)**

Clinical assignment devoted to observation and application of elementary radiographic procedures under direct supervision in a cooperating hospital. (Successful achievement is a graduation requirement.)

2 Weeks of instruction

Prerequisites: BIO 131 Human Biology I and RAD 100 Introduction to Radiologic Technology and RAD 110 Methods of Patient Care or permission of instructor.

RAD 132 Clinical Education II **2 Credits**
 Observation and clinical experience for the development of competency involving elementary radiographic procedures in an affiliated hospital. (Successful achievement is a graduation requirement.)
16 Laboratory Hours
Prerequisite: RAD 131 Clinical Education I (Winterim) or permission of instructor

RAD 133 Clinical Education III (Summer Term I) **3 Credits**
 Clinical experience for the development of competency involving general radiographic procedures in an affiliated hospital.
40 Laboratory Hours
Prerequisite: RAD 132 Clinical Education II and BIO 132 Human Biology II or permission of instructor

RAD 203 Positioning III **1 Credit**
 Laboratory instruction and practice in positioning techniques involving the skull and facial bones.
3 Laboratory Hours
Prerequisite: RAD 133 Clinical Education III or permission of instructor

RAD 210 Radiologic Physics **4 Credits**
 Physics of radiographic equipment, including fundamental electronics, X-ray production, the X-ray tube and related circuitry, and preventive maintenance.
4 Class Hours
Prerequisite: PHY 117 Physics or permission of instructor

RAD 216 Imaging Modalities **1 Credit**
 Introduction to the principles of computerized axial tomography, nuclear medicine and ultrasound.
1 Class Hour
Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 220 Radiologic Pathology **2 Credits**
 A presentation of the various medical and surgical diseases and their relationship to radiographic procedures.
2 Class Hours
Prerequisite: BIO 132 Human Biology II or permission of instructor

RAD 225 Special Radiographic Procedures **4 Credits**
 Introduction to radiographic examinations involving surgical procedures and specialized equipment.
3 Class Hours, 2 Laboratory Hours
Prerequisite: RAD 230 Clinical Education IV or permission of instructor

RAD 230 Clinical Education IV **2 Credits**
 Practical application of advanced positioning techniques with emphasis on the skull and facial bones
16 Laboratory Hours
Prerequisite: RAD 133 Clinical Education III (Summer) or permission of instructor

RAD 231 Clinical Education V (Winterim II)
 Clinical assignment devoted to the application of radiographic procedures under direct supervision in a cooperating hospital. (Successful achievement is a graduation requirement.)
2 Weeks of Instruction
Prerequisite: RAD 230 Clinical Education IV or permission of instructor

RAD 232 Clinical Education VI **2 Credits**
 Practical application of advanced radiographic procedures under direct supervision in an affiliated hospital.
16 Laboratory Hours
Prerequisite: RAD 231 Clinical Education V (Winterim) or permission of instructor

RAD 233 Clinical Education VII **3 Credits**
 Clinical experience for the development of competency.
40 Laboratory Hours

RAD 245 Radiobiology **2 Credits**
 Radiobiology and advanced radiation protection procedures related to diagnostic and therapeutic uses of radiation.
2 Class Hours
Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 250 Quality Assessment **2 Credits**
 The basic principles and techniques of quality assurance testing presented and illustrated through laboratory experiments. Major emphasis on the tests and measurements used to analyze imaging systems with minimum information loss.
2 Class Hours, 1 Laboratory Hour
Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 295 Seminar in Radiography **2 Credits**
 Preparation of the technical report and its organization for both written and oral presentation. Readings in current literature and journals.
2 Class Hours
Prerequisite: Senior Year Status

READING AND STUDY SKILLS

RDG 090 Reading Fundamentals **3 Credits**
 Individual diagnosis of a student's reading strengths and weaknesses, development and implementation of a program to upgrade basic skills. Content to vary with individual students. (This course cannot count for credit toward a degree).
2 Class Hours, 2 Laboratory Hours

RDG 100 College Reading **3 Credits**
 An individualized course emphasizing vocabulary expansion, inferential and critical comprehension, and flexible rate. Instruction and practice in the application of reading skills to specific content areas. (This course can be used only to satisfy an elective choice).
2 Class Hours, 2 Laboratory Hours

RDG 104 Reading for International Students **3 Credits**
 Individual and group instruction in reading for non-native speakers of English. Emphasis on vocabulary expansion, utilizing one or more of the following techniques—decoding, structural analysis and/or context. Practice at all levels of comprehension with emphasis on common patterns of organization in textual material. (This course cannot count toward a degree).
3 Class Hours

RDG 110 Rapid Reading **1 Credit**
 Development of skills characteristic of the mature reader. Examination of structure of material, emphasis on identification of purpose, flexibility of rate. Use of controlled readers, reading accelerators.
2 Class Hours

RDG 120 Speed Reading**1 Credit**

Theories of speed reading coupled with extensive practice in developing a greater range in effective reading rate. Emphasis on adjusting rate and comprehension to the type and level of material.

1 Class Hour, 1-3 Laboratory Hours

The following courses are limited-credit activities for students wishing to enhance various study skills:

**LRS 101 Learning Skills: Time Scheduling
and Concentration**

½ Credit

General principles of academic success, relationship of outside work and study, scheduling and organizing time, study and concentration. Students will construct a working study schedule.

3 Class Hours, 3 Weeks

LRS 102 Memory and Exams**½ Credit**

Theories of memory. Methods of review, strategies for taking essay and objective examinations.

3 Class Hours, 3 Weeks

LRS 103 Learning Skills: Textbook Mastery**½ Credit**

Use of college textbooks as study aids, principles of effective text reading, text study systems. Extensive application of these principles in the student's own textbook.

3 Class Hours, 3 Weeks

LRS 104 Listening and Notetaking**½ Credit**

Examination of organizational patterns as they exist in oral communication. Exploration of systems on note-taking, and application of systems to student's own lectures and notes.

3 Class Hours, 3 Weeks

LRS 110 Learning Skills: The Research Paper**1 Credit**

Shaping the paper: development of a topic, location of appropriate resources and digestion of the material. Writing the paper: outlining, effective composition and proper form. A hands-on approach in which students actually research a topic and compose a term paper.

2 Class Hours for 8 Weeks

LRS 120 The Art of Thinking**1 Credit**

Logic as an art. Logical principles taught in imaginative ways to achieve understanding. Emphasis on the practice of reasoning. Fundamental logical rules are taught as tools to enable the students to gain experience and confidence in thinking about issues that are important to them.

2 Class Hours for 8 Weeks

RESPIRATORY COURSE**RES 120* Intensive Care Unit****3 Credits**

Recognition, medical management and prevention of acute respiratory diseases. Anatomy of the respiratory system including blood gas analysis, care of the airway and mechanical ventilation. Some previous medical terminology desired.

3 Class Hours

***TAUGHT EVENINGS ONLY**

SECRETARIAL SCIENCES**SEC 100 Typewriting****1 Credit**

Introduction to typewriting and machine parts. Develop speed, accuracy in typing exact copy for 3 minutes. For students who want a basic knowledge of the keyboard.

2 Class Hours, 2 Laboratory Hours, 5-Week Course

SEC 101 Typewriting**3 Credits**

Beginning sequence in touch typewriting to make the operator accurate, rhythmical and rapid in the operation of the typewriter. Presentation of keyboard typing of centering problems, memorandums, postal cards, personal and business letters, outlines, manuscripts. Development of proficiency of techniques of typing business letters, tabulations, reports, miscellaneous business forms. Building of typewriting speed and accuracy.

2 Class Hours, 3 Laboratory Hours

SEC 102 Typewriting**3 Credits**

Continuation of basic skill building with emphasis on speed and accuracy in typing business letters, manuscripts, memorandums, tables, various business forms, financial statements, data sheets, employment applications.

2 Class Hours, 3 Laboratory Hours

Prerequisite: SEC 101 Typewriting or equivalent

SEC 103 AVT Typewriting**3 Credits**

Development of the basic techniques of typewriter operation by an audio-visual-tutorial system (AVT) of instruction which permits the student to proceed at own pace. Slide-tape presentations include keyboard mastery, machine operation, horizontal and vertical centering, business applications such as letters, manuscripts, outlines, tabulations, forms. Building of typewriting speed and accuracy.

SEC 104 AVT Typewriting**3 Credits**

Continuation of basic skill building with emphasis on speed and accuracy in typing advanced materials by an audio-visual-tutorial system (AVT) of instruction which permits the student to proceed at own pace. Slide-tape presentations include letter styles and notations, manuscripts, advanced tabulation, alignment, applications, data sheets, memorandums, business statements and forms.

Prerequisite: SEC 103 AVT Typewriting or SEC 101 Typewriting or equivalent

SEC 105* Introductory Typewriting**2 Credits**

Touch typewriting. Presentation of keyboard, typing of centering problems, memorandums, postal cards, personal and business letters, outlines, manuscripts. Emphasis on speed and accuracy.

2 Class Hours, 2 Laboratory Hours

SEC 106* Intermediate Typewriting**2 Credits**

Continued speed and accuracy emphasis. Typing of business letters, manuscripts, memorandums, tables, various business forms, financial statements, data sheets, employment applications.

2 Class Hours, 2 Laboratory Hours

Prerequisite: SEC 105 Introductory Typewriting or equivalent

SEC 110 Shorthand**3 Credits**

Beginning course in Gregg Shorthand, Diamond Jubilee System. Basic principles to promote the ability to read fluently from plates and notes. Longhand and typewritten transcription from shorthand notes dictated from unfamiliar material at minimum rate of 60 words a minute.

2 Class Hours, 3 Laboratory Hours

Prerequisite: SEC 101 Typewriting or equivalent or concurrent enrollment in SEC 101 Typewriting

SEC 111 Shorthand and Transcription**4 Credits**

Development of a minimum rate of 70 words per minute shorthand speed, dictated from unfamiliar material, with efficient transcription techniques to produce typewritten mailable transcripts. Emphasis on shorthand speed building while integrating the correct usage of principles of grammar, spelling, punctuation, capitalization, vocabulary, numbers, word division, words often confused.

2 Class Hours, 5 Laboratory Hours

Prerequisites: SEC 110 Shorthand or equivalent and SEC 101 Typewriting or equivalent

SEC 151 Business Communications**3 Credits**

Development of desirable written communication style. Review of basic writing mechanics. Composition of letters of inquiry and reply, claim and adjustment, credit and collection, sales and promotion, application. Memorandums, news releases, short reports, telegrams.

3 Class Hours

Prerequisite: SEC 101 Typewriting or equivalent

SEC 153 Office Communications**3 Credits**

Practice in written and oral communication. Review of grammar and basic mechanics of effective writing.

3 Class Hours

Prerequisites: SEC 101 Typewriting or equivalent and ENG 100 Basic Language Skills

SEC 210 Executive Typewriting**3 Credits**

Training in advanced typing techniques and magnetic keyboard equipment. Emphasis on preparing documents for law, insurance, real estate, investment, education. Continuation of typewriting speed building.

2 Class Hours, 2 Laboratory Hours

Prerequisites: SEC 102 Typewriting and SEC 240 Office Practice

SEC 212 Technical Typewriting**3 Credits**

Training in understanding the correct procedures in preparing typewritten technical materials and magnetic keyboard equipment. Emphasis on typing equations, formulas, laboratory reports. Continuation of typewriting speed building.

2 Class Hours, 2 Laboratory Hours

Prerequisites: SEC 102 Typewriting and SEC 240 Office Practice

SEC 230 Advanced Shorthand**3 Credits**

Development of shorthand speed with the introduction of special short cuts to increase efficiency. Transcription at the typewriter from notes dictated from unfamiliar material at minimum rate of 80 words per minute. Development of proficiency in production of mailable typewritten transcripts from the student's shorthand notes.

2 Class Hours, 3 Laboratory Hours

Prerequisites: SEC 111 Shorthand and Transcription and SEC 102 Typewriting

SEC 232 Specialized Dictation: Executive**3 Credits**

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of investment, law, insurance.

2 Class Hours, 3 Laboratory Hours

Prerequisites: SEC 230 Advanced Shorthand and SEC 102 Typewriting

SEC 234 Specialized Dictation: Engineering**3 Credits**

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of aerospace, life sciences, synthetics, hydro-carbons-petrochemicals, electronics, communications, computer, nucleonics.

2 Class Hours, 3 Laboratory Hours

Prerequisites: SEC 230 Advanced Shorthand and SEC 102 Typewriting

SEC 240 Office Practice**2 Credits**

Advanced typing material on selected topics using various typewriters. Practical experience in operation of calculating, duplicating, transcribing machines, and magnetic keyboard equipment. Training in telephone procedures on the college switchboard.

4 Laboratory Hours

Prerequisites: SEC 111 Shorthand and Transcription and SEC 102 Typewriting

SEC 242 Secretarial Procedures**3 Credits**

Final preparation for a secretarial career including the steps of the job interview process. Business activities related to the secretarial profession—word processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.

3 Class Hours, 1 Laboratory Hour

Prerequisite: SEC 230 Advanced Shorthand, SEC 240 Office Practice and SEC 151 Business Communications

SEC 244 Office Practice/Procedures**3 Credits**

Final preparation for an office career. Business activities related to the office services environment—word processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.

2 Class Hours, 3 Laboratory Hours

Prerequisites: SEC 102 Typewriting and SEC 151 Business Communications

SEC 246 Office Machines**3 Credits**

Practical experience in the operation of various typewriters including magnetic keyboard equipment, calculators, mimeo and spirit duplicators, transcribing and dictating equipment.

5 Laboratory Hours

Prerequisite: SEC 102 Typewriting or concurrent enrollment

SEC 248 Office Procedures**3 Credits**

Analysis of the basic tasks performed by the office employee. How to apply for and secure the office position. Filing systems and procedures, telephone and telegram services, postal information, office supplies and equipment.

3 Class Hours

Prerequisite: SEC 102 Typewriting or concurrent enrollment

***TAUGHT EVENINGS ONLY**

SEC 260 Directed Secretarial Experience—**Model Office****2 Credits**

Secretarial students are required to work at least four hours weekly in the model office to gain practical working knowledge by producing various types of campus communications.

4 Laboratory Hours

Prerequisite: For Executive and Engineering Secretarial students—

SEC 102 Typewriting and SEC 111 Shorthand and Transcription.

For Office Services Assistant students—SEC 102 Typewriting and

SEC 151 Business Communications

SEC 261 Extended Secretarial Experience**—Model Office****2 Credits**

Continuation of SEC 260 Directed Secretarial Experience—Model Office, with emphasis on advanced word processing training and professional development. Students are required to assume more demanding and sophisticated responsibilities than in SEC 260.

4 Laboratory Hours

Prerequisites: SEC 260 Directed Secretarial Experience—Model Office and approval of the Model Office coordinator and department chairperson

SEC 264 Machine Transcription**3 Credits**

Emphasis on increasing skill in transcribing recorded materials. Continuing development of knowledge of business vocabulary, correct usage of principles of grammar, punctuation, spelling in the machine transcription of business documents.

2 Class Hours, 2 Laboratory Hours

Prerequisites: SEC 101 Typewriting or equivalent

SEC 299 Independent Study**1-4 Credits**

Advanced investigation or research in an individual student's major field of study. Under the guidance of a faculty member, the independent study concerns material beyond the scope and depth of the ordinary course offering. Only one independent study course is allowed per semester.

Prerequisite: Approval of faculty member and department chairperson

SIGN LANGUAGE**HUS 120* Sign Language****3 Credits**

Introduction to total communication as a means of conversing with the deaf. American Sign Language, fingerspelling, numbers, idioms, non-verbal communication, singing songs, poems, stories, psychology of the deaf.

3 Class Hours

HUS 220* Intermediate Sign English**3 Credits**

Intermediate Sign English (Ameslish) is straight English syntax using Amesian based on conceptual signs in English syntax.

3 Class Hours

Prerequisite: HUS 120 Sign Language or permission of instructor

SOCIAL SCIENCE (INTERDISCIPLINARY)**SOS 100 Urban Society****3 Credits**

Conditions, trends and problems of contemporary urban American society. Efforts and proposals for making the cities, suburbs and exurbs better places to live and work in during a time of increasing population and increasing population concentration. A look at such urban systems as education, housing, transportation, criminal justice, business. Consideration of the "Rural Renaissance." Brief focusing upon the current roles of religion, the media, recreation.

3 Class Hours

SOS 120 Science and Civilization**3 Credits**

A survey of the interplay between science/technology and Western Civilization from earliest times to the present (major emphasis on the industrial and post-industrial periods). Role of culture in determining scientific/technological advances, interplay between war and scientific/technological advances, necessary conditions for an industrial revolution (scientific/technological), impact of science/technology on a post-industrial society.

3 Class Hours

SOS 130 Man, Technology and Environment**3 Credits**

Biological, economic and political dimensions of the environmental crisis. The conditions created by population growth, a rising standard of living, the increased demand on natural resources, and the advance of technology. Alternative strategies to deal with pollution and energy problems.

3 Class Hours

SOS 145 Psychology of Sex Roles**3 Credits**

Biological, social and psychological determinants of maleness and femaleness. Physical, economic, political, Biblical and psychological causes of sexism (male superiority). Relationship to cultural evolution.

3 Class Hours

SOS 146 Aging: An Overview**3 Credits**

Multidisciplinary analysis of the bio-psycho-social characteristics of older persons. Examination of major issues and dynamics involved in the process of growing old.

3 Class Hours

Prerequisite: PSY 110 General Psychology or permission of instructor.

SPECIAL TOPICS IN SOCIAL SCIENCE**(SOS 150-250)**

Courses in this sequence will sometimes be off-campus offerings developed for special audiences, such as TV and newspaper courses.

SOS 160-169 Case Studies in Ethnicity**1 Credit**

A sociological analysis of the origins and experiences, the cultural patterns and social relationships of Americans from various ethnic backgrounds.

SOS 160 The Italian American**1 Credit**

Deals with Italian Americans as an initial attempt to focus attention on ethnic groups and their persistent impact.

1 Class Hour

***TAUGHT EVENINGS ONLY**

SOS 288 Seminar in Community Social Service Organizations

3 Credits

Study of federal, state and local agencies, their functions, limitations and interrelationships. Emphasis on determining the structure and purpose of an agency as related to delivery of human services. A beginning, working knowledge of how to integrate human service skills into over-all activities in the field will be provided. Weekly field work in a selected agency required.

2 Class Hours, 2 Laboratory Hours

Prerequisites: 6 Credits in psychology or sociology, 3 of which may be taken concurrently.

SOS 290 Social Science Field Experience

3 Credits

Introduction to the practical issues of the "helping relationship" and an understanding of agency operations. Each student to spend a minimum of 90 hours working in community social and educational agencies. Weekly seminars, outside reading and written reports are required. During the seminars specific helping techniques such as facilitating, goal-setting, reinforcing and supporting will be analyzed.

1 Class Hour

Prerequisite: 3 Credit hours in psychology or sociology plus completion of or concurrent enrollment in 3 additional credit hours in either of these areas.

SOCIOLOGY

SOC 110 Introduction to Sociology

3 Credits

Sociological facts and principles dealing with the scientific study of human relationships. Emphasis on analysis and study of culture and human society, socialization, groups and group structures. Stratification, collective behavioral patterns and the concept of social institutions. Initial experiences for students who desire an introduction to the sociological perspective.

3 Class Hours

SOC 111 Social Problems

3 Credits

The sociology of social and urban problems. Topics may include crime, population, inequality, discrimination, mental illness, attitudes toward work, social control and the dynamics of social change. Students should be aware that individual instructors approach these problems in different ways, depending on students' needs and instructors' interests. SOC 110 Introduction to Sociology is recommended as an initial experience.

3 Class Hours

SOC 210 Crime and Deviant Behavior

3 Credits

The theoretical aspects of deviance as crime, variations in crime rates, the social and psychological causes of crime, other deviant behavior and the salient research discoveries in these areas. Specific areas within criminology such as homicide and suicide from a multidisciplinary approach to permit as broad an understanding of the problem as possible.

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology

SOC 220 Minority Groups

3 Credits

Various minority-majority (racial and ethnic) situations confronting contemporary America. Special focus on the sociological ramifications of these situations. Social movements and conflicts.

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology

SOC 230 Marriage, Family and Divorce

3 Credits

Social and personal factors which make for adequate family functioning, the forms the family takes, its internal processes and the functions it serves in society.

Covers systematically the important theoretical and experimental ground on those issues relevant to both the scholarly and practice-minded student.

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology

SOC 299 Independent Study

1-3 Credits

An individual student project in sociology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

Prerequisite: 3 semester hours in sociology

SPANISH

SPA 101, 102 Beginning Spanish

4, 4 Credits

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each

Prerequisite: SPA 101 Beginning Spanish for SPA 102

SPA 201 Intermediate Spanish I

3 Credits

Intensive review and continuation of grammar and syntax. Intensive and extensive reading of literary works of recognized authors. Aural comprehension and oral practice in the classroom and audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour

Prerequisite: SPA 102 Beginning Spanish

SPA 202 Intermediate Spanish II

3 Credits

Intensive and extensive reading of literary works of recognized authors. Classroom discussion and conversation based on these texts, in the language.

3 Class Hours, 1 Laboratory Hour

Prerequisite: SPA 201 Intermediate Spanish I

SPA 203, 204 The Spanish Language Through Its Literature

3, 3 Credits

Practice in and emphasis on conversation and composition in Spanish, based on the reading of various literary masterpieces from centuries past to the present. (Not offered in 1980-81 academic year).

3 Class Hours each

Prerequisites: SPA 202 Intermediate Spanish II for SPA 203

SPA 203 The Spanish Language Through Its Literature for SPA 204

SPA 205 Spanish Conversation and Composition I

3 Credits

The art of conversation and writing in Spanish practiced from basic proficiency to that of a more advanced level. Topics of conversation of common, daily interest subjects. Writing of short paragraphs and letters. (Not offered in 1980-81 academic year).

3 Class Hours

Prerequisite: SPA 202 Intermediate Spanish II or equivalent

SPA 299 Independent Study: Spanish

1-3 Credits

An individual student project concerned with advanced work in a specific area of Spanish. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in Spanish

SPEECH

SPK 100 Basic Speaking

2 Credits

Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types. Not for Liberal Arts students.

2 Class Hours

SPK 102 Effective Speaking

3 Credits

Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types.

3 Class Hours

SPK 299 Independent Study: Speech

1-3 Credits

An individual student project concerned with advanced work in a specific area of speech. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in speech

THEATER

THR 101 Theater Appreciation

3 Credits

Art of the theater to increase understanding and appreciation of drama. A cultural approach considering the interrelationship of all aspects of production including plays, acting, directing, costume, make-up and lighting. Attendance at local productions. (Students taking this course may also be interested in LIT 230 American Drama, LIT 233 World Drama.)

3 Class Hours

THR 109, 110 Practicum in Theater Design and Technology

3, 3 Credits

Stage design (both lighting and scenic) and construction techniques are studied first hand, as students participate in actual production of two plays each semester. Problems encountered during a production are analyzed. Individualized instruction is increased as students begin to focus on their particular areas of interest.

3 Class Hours each

THR 111 Beginning Acting

3 Credits

Fundamental acting techniques. Development of individual skills and disciplines relative to external acting techniques. Use of face, voice and movement.

3 Class Hours

THR 112 Acting

3 Credits

Intensive application of acting techniques through scene study and performance. Problems of character analysis, internal acting and style.

3 Class Hours

THR 117 Creative Dramatics

3 Credits

Fundamentals of creative dramatics, its use in teaching, recreation and rehabilitation. Introduction to techniques used and practical application opportunities.

3 Class Hours

THR 190 Broome Community College Theater

1 Credit

Students who participate in the plays and performances of the BCC Theater Co. receive one credit per semester. See page 25.

THR 201, 202 Children's Theater

3, 3 Credits

Touring children's theater company during academic year. Performances at area elementary schools for classtime and assembly period programs. Visiting with students pre/post production. Design and construction of costumes, sets and properties. Analysis of children-oriented plays, development of scripts, rehearsal and performance.

3 Class Hours each

THR 203 Summer Touring Children's Theater Company

3 Credits

Touring children's theater company during summer. Performances at area recreation centers, parks, camps and playgrounds. Visiting with children pre/post production. Design and construction of costumes, sets, and properties. Analysis of children-oriented plays, development of scripts, rehearsal and performance.

3 Class Hours

THR 218 Role Study and Characterization

3 Credits

The varied creative processes by which an actor might develop a characterization are studied in theory and explored in practice with emphasis upon scenework.

3 Class Hours

THR 219 Periods and Styles of Acting

3 Credits

Procedures and techniques necessary for acting in theatrical period productions such as Elizabethan, Italian Renaissance, Restoration, Absurdist, and innovative styles.

3 Class Hours

Prerequisites: THR 218 or permission of instructor

THR 221 History of the Theater

3 Credits

History of stage production with emphasis on theater as a performing art. Chronological examination of theater activity as a mirror of social and cultural experience from primitive times through the Renaissance.

3 Class Hours

THR 222 History of the Theater

3 Credits

History of stage production from the 18th Century to the present, with attention to the contribution of literature and the fine arts to stage development.

3 Class Hours

THR 231 Stage Directing I

3 Credits

Examination of the perspective of the director in relation to himself, the play, the actors, designers, playwright, and the collaborative evolution of the production. Development of directing methods and techniques in terms of casting, pictorial emphasis and harmony, rehearsal and production procedures. Preparation of prompt book and direction of scenes. Proscenium and non-proscenium techniques.

3 Class Hours

THR 232 Stage Directing II

3 Credits

Detailed analysis of directing in relation to theatrical styles and periods. Examination of the techniques of such directors as Meyerhold, Antoine, Guthrie and Kazan. Direction of pertinent scenes.

3 Class Hours

THR 299 Independent Study: Theater

1-3 Credits

An individual student project concerned with advanced work in a specific area of theater. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in theater

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D. ELSIE WAGER, Prof.
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DUPLICATING CENTER

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EDUCATIONAL OPPORTUNITY PROGRAM

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EDUCATIONAL TECHNOLOGY

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M.A., Ph.D., SUNY at Binghamton
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B.A., Montclair State Teachers College
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OGDEN J. CLARK, Coordinator

HEALTH SERVICES

IRENE CAMPO, Director
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F.N.P., SUNY at Binghamton

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Professor Emeritus
HAROLD W. HICKEY
Dean Emeritus

GEORGE HIGGINBOTTOM
Dean of the Division
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M.A., San Francisco State

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B.A., Lycoming College
M.L.S., SUNY at Albany
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B.A., George Washington
University
M.S.L.S., Catholic University

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M.Div., Colgate-Rochester Divinity
School
M.S.L.S., Syracuse University
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Emeritus

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JACK RYDER, Instructor
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IRWIN SIMSER, Prof.
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Professional Engineer

Emeritus

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DOUGLAS RITTENHOUSE, Asst. Prof.
Teaching Certification, University of
the State of New York

Emeritus

MARION A. FORBES
IRWIN W. LAWN
EDWIN P. WALSH

MEDICAL LABORATORY TECHNOLOGY

See Biological Sciences

MEDICAL OFFICE ASSISTANT

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M.S., St. Bonaventure University

TERESSA H. BURAN, Assoc. Prof.
B.A., Alfred University
M.S.T., SUNY at Binghamton

Emeritus

CLYDE CHAUNCEY

MEDICAL RECORD TECHNOLOGY

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R.R.A.

JANE SHAUGHNESSY, Instr.
A.R.T.
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RUTHE B. O'BOYLE, Asst. Prof.
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NANCY ROSSITER, Instr.
B.S., SUNY College at Cortland

DUANE WHITTAKER, Asst. Prof.
B.S., SUNY College at Cortland

PHYSICAL PLANT

RALPH WALTER
Assistant to Vice President

PHYSICS

See Engineering Science and Physics Department

PLACEMENT

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B.S., SUNY College at Cortland
M.P.S., University of Colorado

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B.A., SUNY College at Oneonta

MARTHA KUCHARIK
Employment Placement Specialist
B.S., SUNY College at Buffalo

PLANNING AND DEVELOPMENT

HENRY W. PLISKE, Director
B.B.A., Cleveland State University
M.L.I.R., Michigan State University

PUBLIC RELATIONS

See Community Relations

RADIOLOGIC TECHNOLOGY DEPARTMENT

NANCY BUTTON, Chairperson
R.T. Nesbitt Memorial Hospital
School of Radiologic Technology
B.A., Wilkes College
M.S., Marywood College

JANE DeMARIA, Instr.
A.A.S., Broome Community College
B.S., Medical College of Georgia

BARBARA VALENTINO, Instr.
A.A.S., Broome Community College
B.P.S., SUNY Empire State College

SCHEDULING

ELIZABETH K. MARECEK
Records and Scheduling

SECRETARIAL SCIENCES DEPARTMENT

Chairperson, Appointment Pending

ELIZABETH R. ALTENHOFEN, Asst. Prof.
B.S., Hartwick College

MARIE DAVENPORT, Assoc. Prof.
A.A.S., Broome Community College
B.S., M.S., SUNY at Albany

CORINNE CRANDELL, Asst. Prof.
A.A.S., Mohawk Valley Community College
B.S., SUNY at Albany
M.S., SUNY College at Oneonta

DONNA E. MILLER, Tech. Asst.
A.A.S., Broome Community College

EVELYN A. KATUSAK, Prof.
B.S., M.S., SUNY at Albany

ESTHER SABOL
Coordinator of Word Processing
Center/Model Office
A.A.S., Broome Community College

DORATHY SAEGER, Assoc. Prof.
B.A., Valparaiso University
M.B.A., University of Denver

SOCIAL SCIENCES DEPARTMENT

RITA HOGAN, Chairperson
B.A., M.A., SUNY at Binghamton

PATRICIA A. BEGASSE, Asst. Prof.
A.B., Smith College
M.S., SUNY College at Cortland
M.S., University of Scranton

FRANCIS P. CASELLA, Prof.
A.B., M.A., SUNY at Albany

ROBERT COTTEN, Asst. Prof.
A.B., Princeton University
J.D., Harvard University

CHARLES CROLL, Prof.
B.A., SUNY at Binghamton
M.S., SUNY College at Oneonta

FRANK S. DI STEFANO, Assoc. Prof.
A.B., University of South Carolina
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GERALD FREEMAN, Assoc. Prof.
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ROBERT F. LIDDY, Assoc. Prof.
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JO ANNE MANIAGO, Assoc. Prof.
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M.A., Ph.D., Boston University

ROGER McVANNAN, Assoc. Prof.
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RICHARD M. ROMANO
B.A., St. Lawrence University
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DEPARTMENT OF SPECIAL CAREER PROGRAMS

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STUDENT ACTIVITIES

R. BRUCE MacGREGOR, Director
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ADJUNCT FACULTY

The following taught part-time at the College
during the 1979-80 academic year.

BIOLOGICAL SCIENCES AND MEDICAL LABORATORY TECHNOLOGY

ELSIE BICKHART
B.S., Hartwick College
SANDRA EDWARDS
A.A.S., Broome Community College
MARY M. GREENE

MILDRED KOLODZJ
MARIANNE MATTIES
B.A., Smith College
ELEANOR PEPPERMULLER
ELEANOR STETHERS
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BUSINESS

JOHN BARTH
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CARLETON A. CLEVELAND
B.A., Wittenberg University
MAXINE COHEN
B.A., University of Vermont
WILLIAM COOKSLEY
DONALD J. CORRIGAN
B.A., Regents External Degree
M.A., Central Michigan University
DIONNE DRISCOLL
B.S., SUNY College at Oneonta
CARL ERNSTROM
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William Greene

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MARCELLA SWARTZ
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B.A., Syracuse University
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B.S., M.S., Clarkson College of Technology

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CONTINUING EDUCATION

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CLARENCE J. GLANVILLE, JR.
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CRIMINAL JUSTICE

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M.S., Appalachian State College

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B.E.T., M.S., Rochester Institute of Technology
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M.S., Syracuse University

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MARGARET H. MANLEY
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M.S.N., University of Colorado
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Licensed Technologist
DOROTHY DARRIN
Licensed Therapist
JUANITA HARRISON
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B.S., SUNY at Albany
SUSAN MORELLINO
B.S., B.M., SUNY at Albany

ANNE OAKES
B.S., M.S., SUNY at Albany
MARIAN REPPELLA
B.S., Bloomsburg State College

SOCIAL SCIENCES

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A.B., Cornell University
M.A., SUNY at Binghamton
JOHN BRICK
B.A., Queens College
M.S., SUNY at Binghamton
KEVIN J. COLGAN
B.A., SUNY College at New Paltz
M.A., SUNY at Binghamton
PETER DOUBRAVA
B.A., M.A., Chapman College
PATRICIA GREEN
B.A., M.S., Mercer University
NASSER HOMAPOUR
B.A., M.A., Tehran University
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B.A., University of Utah
M.A., SUNY at Binghamton
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B.A., New York University
M.S., Long Island University
Ed.D., Fairleigh Dickinson University
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B.A., Drury College
M.A., Hollins College
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B.A., SUNY College at New Paltz
MICHAEL J. KURLA
B.A., M.A., SUNY at Binghamton
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B.A., Moravian College
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B.A., University of Vermont
M.A., University of New Hampshire
DAVID J. MEEKER
B.A., Bloomsburg State College
M.A., Fairleigh Dickinson University
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B.S., Russell Sage College
M.A., Alfred University
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ROBERT J. PARCELLS
B.S., B.A., Boise State University
VALERIE PERDUE
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M.S., Elmira College
M.Ed., Pennsylvania State University

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M.A., SUNY at Binghamton
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M.A., University of Michigan
MARGARETTA ROWER
B.S., SUNY College at New Paltz
M.S., Ithaca College
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B.S., M.S., University of Scranton
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M.S., SUNY at Binghamton
ZITA WENZEL
B.A., Adelphi University
M.A., SUNY at Binghamton
JUDY WHITEMAN
B.A., Brooklyn College
M.A., New School for Social Research

STATE UNIVERSITY OF NEW YORK

CLIFTON R. WHARTON, JR., Chancellor

Broome Community College is one of the 64 colleges that comprise the State University of New York (SUNY), which was established by the State Legislature in 1948. The 64 units include 30 locally-sponsored two-year community colleges like Broome.

The University's 64 geographically dispersed campuses bring educational opportunities within commuting distance of virtually all New York citizens. In academic 1979-80 more than 350,000 students enrolled in its classrooms or pursued study at home, at their own pace, through such innovative institutions as Empire State College, a campus without walls. Of the 350,000, about 30 percent are 24 years of age or older.

The University is uniquely organized into a system comprised of:

Four University centers, two medical centers, 12 colleges of arts and sciences, a non-residential college, four specialized colleges, five statutory colleges, six agricultural and technical colleges, and 30 locally-sponsored community colleges.

In addition to baccalaureate studies, 12 of the senior campuses offer graduate study at the doctoral level, and 22 at the master's level.

The two-year colleges offer associate degree opportunities in a wide range of technical areas. They also provide transfer programs for students wishing to continue to the baccalaureate degree. In the 1979-80 college year, the community colleges enrolled more than 160,000 students. This number is about equally divided into full-time and part-time categories. Ten Educational Opportunity Centers serve the educationally deprived by upgrading occupational skills for more gainful employment and identifying students with college potential to prepare them for enrollment in the state's public and private colleges.

State University is governed by a Board of Trustees, appointed by the Governor, which determines the policies to be followed by the 34 State-supported campuses. The 30 community colleges operating under the program of State University have their own local boards of trustees. SUNY's motto is "To Learn-To Search-To Serve," which emphasizes The University's three-fold mission of education, research and public service.

During its brief history, State University has graduated more than 700,000 alumni, the majority of whom are pursuing their careers in communities across the state.

COLLEGES OF STATE UNIVERSITY OF NEW YORK

COMMUNITY COLLEGES

(Locally-sponsored, two-year colleges under the program of State University)

Adirondack Community College at Glens Falls
 Broome Community College at Binghamton
 Cayuga County Community College at Auburn
 Clinton Community College at Plattsburgh
 Columbia-Greene Community College at Hudson
 Community College of the Finger Lakes at Canandaigua
 Corning Community College at Corning
 Dutchess Community College at Poughkeepsie
 Erie Community College at Williamsville, Buffalo, Orchard Park
 †Fashion Institute of Technology at New York City
 Fulton-Montgomery Community College at Johnstown
 Genesee Community College at Batavia
 Herkimer County Community College at Herkimer
 Hudson Valley Community College at Troy
 Jamestown Community College at Jamestown
 Jefferson Community College at Watertown
 Mohawk Valley Community College at Utica
 Monroe Community College at Rochester
 Nassau Community College at Garden City
 Niagara County Community College at Sanborn
 North Country Community College at Saranac Lake
 Onondaga Community College at Syracuse
 Orange County Community College at Middletown
 Rockland Community College at Suffern
 Schenectady County Community College at Schenectady
 Suffolk County Community College at Selden, Riverhead, Brentwood
 Sullivan County Community College at Loch Sheldrake
 Tompkins Cortland Community College at Dryden
 Ulster County Community College at Stone Ridge
 Westchester Community College at Valhalla

UNIVERSITY CENTERS

State University at Albany
 State University at Binghamton
 State University at Buffalo
 State University at Stony Brook

COLLEGES OF ARTS AND SCIENCE

College at Brockport
 College at Buffalo
 College at Cortland
 Empire State College
 College at Fredonia
 College at Geneseo
 College at New Paltz
 College at Old Westbury
 College at Oneonta
 College at Oswego
 College at Plattsburgh
 College at Potsdam
 College at Purchase

SPECIALIZED COLLEGES

College of Environmental Science and Forestry at Syracuse
 Maritime College at Fort Schuyler
 College of Technology at Utica/Rome
 †Fashion Institute of Technology

*STATUTORY COLLEGES

College of Agriculture and Life Sciences at Cornell University
 College of Ceramics at Alfred University
 College of Human Ecology at Cornell University
 School of Industrial and Labor Relations at Cornell University
 College of Veterinary Medicine at Cornell University

*These operate as "contract colleges" on the campuses of private universities.

†While offering a limited number of baccalaureate degree programs, in addition to the associate degree, FIT is financed and administered in the manner provided for community colleges.

COLLEGES AND CENTERS FOR THE HEALTH SCIENCES

Health Sciences Center at Buffalo
 University Center
 Health Sciences Center at Stony Brook
 University Center
 Downstate Medical Center at Brooklyn
 Upstate Medical Center at Syracuse
 College of Optometry at New York City

AGRICULTURAL AND TECHNICAL COLLEGES

College at Alfred
 College at Canton
 College at Cobleskill
 College at Delhi
 College at Farmingdale
 College at Morrisville

MAP OF THE CAMPUS

1. TITCHENER HALL

Engineering Science and Physics
Liberal Arts
Mathematics

2. WALES BUILDING

Admissions Office
Administrative Offices
Office of Continuing Education
Counseling and Student Development
Center
Finance Office
Health Service Office
Registrar's Office
Public Relations Office
Student Affairs Office

3. SCIENCE BUILDING

Chemical Technology
Dental Hygiene

4. ELECTRICAL BUILDING

Educational Opportunity Program
Electrical Technology

5. STUDENT CENTER

Book Store
Cafeteria
Gymnasium
Little Theater
Physical Education

6. MAINTENANCE BUILDING

7. THE UNION

Student Activities
Student Lounge

8. MECHANICAL BUILDING

Civil Technology
Mechanical Technology
Special Career Programs

9. CECIL C. TYRRELL LEARNING RESOURCES CENTER

Audio-Visual
Developmental Centers
Mathematics
Reading and Study Skills
Writing
Educational Technology
Library
Science Learning Center

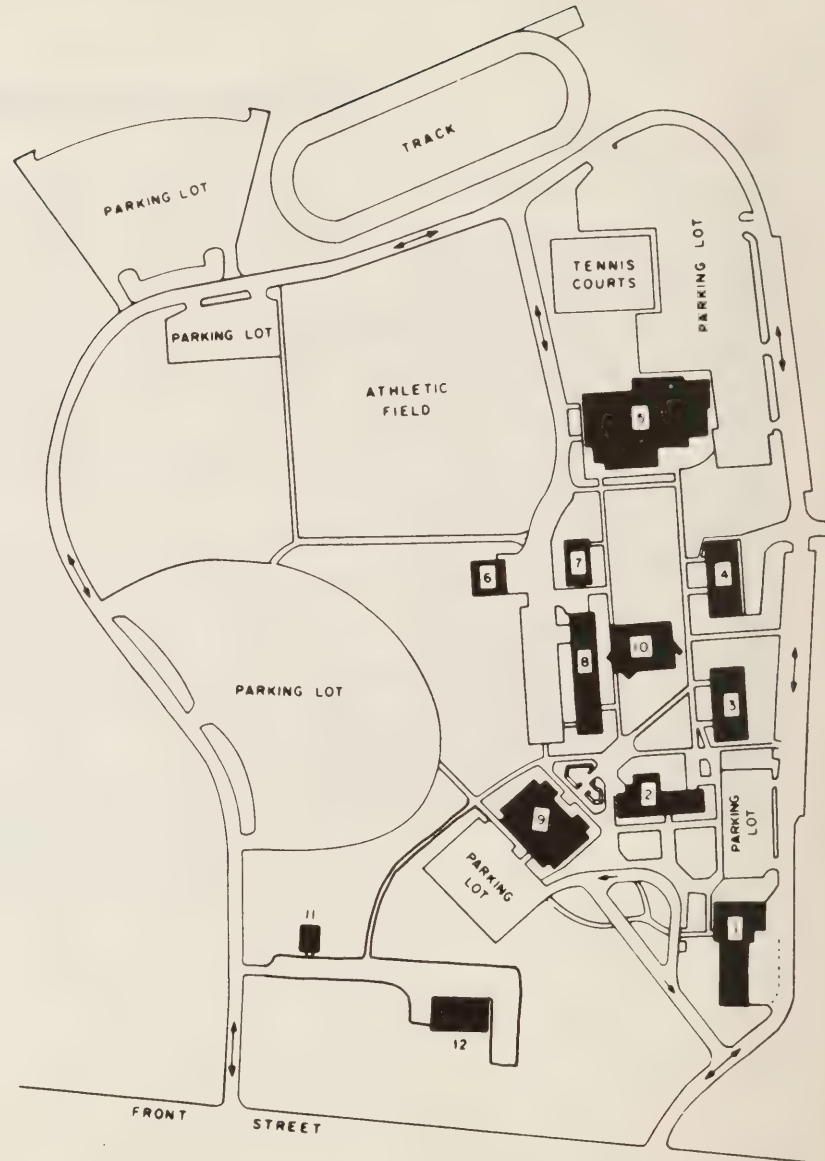
10. BUSINESS BUILDING

Accounting and Business Administration
Computer Center
Marketing
Medical Office Assistant
Medical Record Technology
Radiologic Technology
Secretarial Sciences

11. FACULTY OFFICES

12. 901 FRONT STREET

Biological Sciences and
Medical Laboratory Technology
Nursing



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X

X-Ray Technology (See Radiologic
Technology)

COLLEGE CALENDAR FOR 1980-81

FALL SEMESTER 1980

August 25-27 (Mon-Wed)	Registration
September 1 (Monday)	Labor Day—No Classes
September 2 (Tuesday)	Classes Begin
September 2-8	100% Tuition/Fee Refund Dates
September 9-15	50% Tuition/Fee Refund Dates
September 16-22	25% Tuition/Fee Refund Dates
October 13, 14 (Mon, Tues)	Columbus Day Holiday
November 27, 28 (Thurs, Fri)	Thanksgiving Holiday
December 19 (Friday)	Last Day of Classes
December 22-24 (Mon-Wed)	Examination Period
December 29 (Monday)	Final Grades Due by Noon

SPRING SEMESTER 1981

January 12-14 (Mon-Wed)	Registration
January 19 (Monday)	Classes Begin
*January 19-24	100% Tuition/Fee Refund Dates
*January 26-31	50% Tuition/Fee Refund Dates
*February 2-7	25% Tuition/Fee Refund Dates
March 9, 10 (Mon, Tues)	Break
April 16-20 (Thurs-Mon)	Easter Break
May 8 (Friday)	Last Day of Classes
May 18 (Monday)	Final Grades Due
May 29 (Friday)	Graduation

*In the Spring Semester, students in classes that meet only on Saturdays will have until 12 noon on the next school day to notify the College of withdrawal and still qualify for the appropriate tuition/fee refund.

